Bombay Gazette.

ADVERTISER.

VOL. 37. WEDNESDAY, FEBRUARY 8, 1826. No. 1862.

Higgs and Briggs

WILL SELL

BY AUCTION,

TO-MORROW the 9th Instant,

JOCKEY Whips, Razors and Penknives, Music Boxes, Coarse Woollen Cloth, Green Baize, a few Casks of American Flour, Corks, Yellow and White Quills, Gentlemen's Cotton Socks, Patent Shot, Horse Syringes, Dish Covers, &c.

AT ONE O'CLOCK,

A Single and a Double Poled Tent, and a variety of Books.

Meadows Street, 8th Feb. 1826.

To be Sold

BY PUBLIC AUCTION

AT THE

RACE STAND,

AT BOMBAY

ON THURSDAY the 16th Instant,

THE

RACING STUD

OF

E. E. ELLIOT, ESQ.

THE Sale to commence at half past 4 o'clock P. M. The term of which may be known by application to HIGGS and BRIGGS.

Bombay, 8th Feb. 1826.

Higgs and Briggs

HAVE THIS DAY EXPOSED

FOR SALE

On Commission,

A VARIETY of China manufactured Ivory Goods, elegantly finished, consisting of Visiting Card Cases, Parasol handles, Needle Cases, &c.

China Silk Fans, Feather ditto, Rice Drawing Paper, Tea Caddies, &c.

Meadows Street, 8th Feb. 1826.

Higgs and Briggs

WLL SELL

BY AUCTION,

To-morow the 9th Instant,

AT ONE O'CLOCK,

A SERVICEABLE

BUGGY,

BUGGY HORSE,

AND HARNESS.

Meadows Street, 8th Feb. 1826.

Higgs and Briggs

HAVE FOR SALE

On Commission,

A NEAT

CURRICLE,

A PAIR OF CAPITAL

ARAB HORSES,

AND BRASS MOUNTED

HARNESS

PRICE RUPEES 2000,

THE PROPERTY OF A GENTLEMAN LEAVING BOMBAY.

Meadows Street, 8th Feb. 1826.

Higgs and Briggs

HAVE FOR SALE

FINE BENGAL

TABLE CLOTHS,

SIZE

7 By 11 Feet	each Rs.	10
7 By 28 Do.	"	26
Fine Bengal Towels per Dozen,	"	4
Best Ivory handled Knives and Forks in Oak Boxes per Set, ...	"	45
Balanced Handled Ditto	"	55

Meadows Street, 8th Feb. 1826.

Higgs and Briggs

HAVE JUST RECEIVED

FOR SALE

On Commission,

FINE OLD

SHIRAZ WINE,

IN CARB HOYS,

PRICE Rs. 18 EACH,

And in Shiraz Bottles, price Rs. 36 per Dozen.

Meadows Street, 8th Feb. 1826.

A BUNGALOW

ON THE ESPLANADE

Near the Church Gate,

TO BE SOLD

BY PUBLIC AUCTION,

On Saturday the 11th Instant,

AT 3 o'CLOCK AFTERNOON,

BY

Eduljee Cursetjee's Sons.

Bombay, 8th Feb. 1826.

Eduljee Cursetjee's Sons

WILL SELL

BY PUBLIC AUCTION,

On Monday the 13th Instant,

AT THEIR ROOMS,

THE Effects of two Officers deceased. consisting of a Saddle Horse, Tents, Wearing Apparel, and various other Articles.

ALSO

The Property of a Gentleman going to England, Madeira Wine, Plate, Plated Ware, Tables, Chairs, &c.

At 12 o'Clock, a Bengal Built Buggy with Horse and Harness complete and some Saddle Horses, likewise an English Mare belonging to the late Mr. Dents.

Bombay, 8th Feb. 1826.

Fackeerjee Bhoyjee,

RESPECTFULLY informs his Friends and the Public, that he has just received another Fresh Lot of Superior ARAB HORSES, from Bussora, amongst which there are Horses fit for all purposes.

Bombay, 8th Feb. 1826.

A CARD.

MRS. TADMAN in reducing the price of Bread to the rates below mentioned cannot avoid this opportunity of expressing her grateful thanks to her friends and such Ladies and Gentlemen as have hitherto continued to take their supplies from her BAKERY. A report having been industriously spread abroad that Mrs. TADMAN had disposed of her Interest in the BAKERY, Mrs. T. begs to inform the Public that such is not the case, and that the benefit from it forms a principal support to her and her family.

PRICE OF BREAD.

1st Sort	13	Ounces	48	Reas.
2d Do.	13	Do.	40	Do.
Brown Do.	16	Do.	48	Do.
Cake, Muffin and Roll	6½	Do.	24	Do.

Fine Flour and Rolang at 88 Reas per Seer.

N. B.—The price of Pastry, &c. may be had on application at the Bakery,

Bombay, 8th Feb. 1826.

FIRST

Calcutta Lottery

OF 1826.

TICKETS in the above LOTTERY are for Sale at the Office of Messrs. JOHN LECKIE and CO. at Rupees 120 each.

Tickets drawn the First and Second days' drawing, and as such Prizes of Sa. Rs. 100 each received in part Payment at Rs. 100.

The 3rd day's drawing was to take place on the 28th ultimo.

Bombay, 3d Feb. 1826.

NOTICE.

THE Interest of Mr. GEORGE ALEXANDER PRINSEP in the business formerly carried on under the Firm of PRINSEP AND CO. having ceased this day, the same will hereafter be conducted by Mr. THOMAS F. RANKEN and Mr. JOHN SAUNDERS the late partners of Mr. PRINSEP, under the firm of RANKEN and SAUNDERS.

Bombay, 1st February 1826.

Bills on London.

MESSRS. RANKEN and SAUNDERS as Agents for Messrs. PALMER, and Co. of Calcutta will continue drawing on Messrs. COCKERELL TRAIL, and Co. of London until further notice.

Bombay, 8th Feb. 1826.

FIRST

Calcutta Lottery

OF 1826.

TICKETS in the above LOTTERY are on Sale at the Office of Messrs. RANKEN and SAUNDERS at Rs. 120 each.

Bombay, 8th Feb. 1826.

For Sale

AT THE GODOWNS

OF

MESSRS. RANKEN AND SAUNDERS.

THE following WINE and LIQUORS from Messrs. HARPER and BELL,

Sherry in Butts, XXX	Rs.	950
Ditto XX		850
Ditto in bottle per Dozen		20
Ditto in Ditto Ditto XXX		22
Port in Pints		11
Ditto in bottles		20
Claret ditto		45
Rumshrub per Dozen Pints		20
Cherry Brandy		26
Also from Messrs. E. Butler and Son.		
Superior old Sherry in butts	Rs.	700
Ditto in bottles		20
Barsac		20
Vin de Grave		15
Serceal in Q. Casks		300
Ditto in Pints per Dozen		20
Champaign of very superior quality imported per Alacrity,		
White		60
Pink		60

Bombay, 8th February 1826.

Advertisement.

NOTICE IS HEREBY GIVEN.

THAT Mr. ROBERT DIROM, is authorized "per Procuratim" to Sign our Firm from this date.

SHOTTON & CO.

Bombay, 7th February 1826.

DISCONTINUANCE

OF THE

BOMBAY CHRONICLE.

CIRCUMSTANCES of imperious necessity having induced the PROPRIETORS of the above Paper to relinquish its further publication, they embrace this opportunity of tendering their unfeigned gratitude to those Gentlemen who have so kindly and uniformly contributed to its support.

The PROPRIETORS earnestly request an early adjustment of all outstanding claims.

Communications addressed to the Editor will be duly attended to.

The Presses, Types, and other materials of the Chronicle Office, are not yet sold.

Bombay, 1st Feb. 1826.

For Passage,

TO LONDON DIRECT,

THE

WINDSOR CASTLE,

BURTHEN 600 TONS,

William Heathorn,

COMMANDER.

THIS Vessel has very good accommodations for Passengers, and may be expected here from Calcutta in all this month. For further particulars apply at the Office of Messrs. RANKEN and SAUNDERS, where plans of her accommodations may be seen.

Bombays 8th Feb. 1826.

NOTICE IS HEREBY GIVEN,

THAT all Persons indebted to the Estate of GILBERT MELVILLE, late a Captain in the 1st Regt Light Cavalry on this Establishment deceased, are requested to pay the same to DAVID SETON, Esq. one of the Executors of the said deceased, and all Persons who have claims on the same are requested to make them known to the said Executor without delay.

(2) Bombay, 2d Feb. 1826.

Advertisement.

APPLICATION having been made to the Supreme Court of Judicature at Bombay, that Letters of Administration with the Will annexed of all and singular the Goods and Chattels, Rights and Credits of JOHN WILLIAM MURRAY late a Lieutenant of His Majesty's 4th Regiment of Light Dragoons on their Bombay Establishment deceased be granted to Miss JANET ELIZABETH MURRAY the Sister of the said Deceased. All persons Concerned therein are hereby Apprized thereof.—Dated the 31st January, 1826.

BROWNE,

PROCTOR.

Advertisement.

PROBATE of the last Will and Testament of JOHN FORD, late a Lieutenant Colonel in the Military Service of the United Company of Merchants of England trading to the East Indies, on their Bombay Establishment deceased, having been granted to ELIZABETH MARY FORD, his Widow the Executrix therein named.—All Persons concerned therein are hereby apprized thereof.—Dated this 6th Day of February 1826.

E. C. MORGAN.

For Sale

AT THE

Gazette Office

BLANK Bills of Exchange, Powers of Attorney, Interest and Respondentia Bonds, Policies of Insurance, Bills of Lading, &c. &c.

Bombay, 8th Feb. 1826.

Digitized with financial assistance from the
Government of Maharashtra
on 28 June, 2017

Bombay Gazette.

VOL. 37. WEDNESDAY, 8TH FEBRUARY, 1826. No. 1862.

GENERAL ORDERS.

BOMBAY CASTLE, 26TH JANUARY 1826.

By the Hon'ble the Governor in Council.

No. 41. of 1826. An order by Major George Sale dated Camp Kaira 1st October 1825 appointing Assistant Surgeon Graham to the temporary charge of the Medical Stores is confirmed.

No. 42 of 1826---The Honorable the Governor in Council has been pleased, in the General Department, to appoint assistant Surgeon Taylor to be Vaccinator in the Deckan vice McMorin promoted, and Assistant Surgeon Michie to be Vacciuator in Guzerat vice Glen promoted.

No. 43 of 1826---Ensign George Johnson of the 18th Regiment N. I. is allowed a furlough to sea on sick certificate for a period of twelve months from the date of his embarkation.

Lieutenant G. Hammond of the 30th Regiment Madras N. I. is allowed a furlough to the Cape of Good Hope on sick certificate for one year from the date of his embarkation.

The leave of absence at the Presidency granted under date the 7th October to Lieutenant Colonel Drummond of the Engineers is extended to the 28th Proximo.

No. 44 of 1826.---The Hon'ble the Governor in Council is pleased as a temporary arrangement to place the arsenals within the Surat Division of the Army, and with the Guicowar Subsidiary Force under the control of Major Russell of the Artillery, and those within the Poona Division of the Army under the control of Major Hardy, of the Artillery, without prejudice to the respective Commands of those officers.

The appointments of Adjutants and Quarter Masters to the Artillery in the Surat and Poona Divisions of the Army are abolished.

Bombay Castle, 30th January 1826.

No. 45 of 1826.—In consequence of the severe indisposition of Lieutenant Colonel Commandant Baker, Commissary General of the Army of this presidency, the Governor in Council is pleased to permit that officer to proceed by the earliest opportunity to the Cape of Good Hope and eventually to Europe for the benefit of his health.

Lieutenant Colonel E. Belassis, of the corps of Engineers is appointed acting Commissary General during Lieutenant Colonel Commandant Baker's absence, and will assume charge of the Department from this date.

By Order of the Hon'ble the Governor in Council,

W. NEWNHAM,

Chief Secretary.

EXCHANGE.

On London.6 mon's.1 | 10*d*.to 1 | 11*d*.
Calcutta..90 Days 102 B'y Rs. per 100 Siccas.
Madras..30 ...do. 97 B'y Rs.per 100 Madras
A five per cent loan open.

THE GAZETTE.

BOMBAY.

WEDNESDAY, 8TH FEBRUARY, 1826.

Bhurtpore was stormed and taken on the 18th of last month, at a much less expense of lives on our part, than could well have been hoped, considering the numbers and nature of the troops on both sides, and the peculiar circumstances under which the town was invested: our loss has been estimated between 5 and 600 men, and about 30 officers; the names of whom we have not yet received; while that of the enemy is said to be upwards of 5000 fighting men.

The period immediately preceding the march of our troops towards the breach, is described as awful in the extreme, when thousands were enxiously watching, in breathless silence, for the signal to spring forward to death or victory. The exploding of a mine under one of the bastions, at length announced the moment for attack, and all thoughts of vacant seats at the following mess, gave place to the determined spirit which won the day: each pushed forward with the utmost impetuosity, and formed a charge which no passive human strength could withstand; and the enemy, though desperate during the onset, soon lost all confidence, and fell like grass before the scythe; at the sight of which, despair seized the garrison of the fort, which was surrendered without further resistance. The mixed crowd of unfortunate beings that rushed out, with horror depicted in every countenance, flew, they knew not where, for refuge, and were surrounded by our cavalry on the outside of the town: Doorjun Saul and his family, are said to have been captured in an attempt to escape.

The number of heavy guns and small arms, is greater than was expected; but from the state of the works, it is believed that Doorjun Saul never anticipated a regular seige, till the march of our troops gave him intimation; when it was too late to effect the proper arrangements and repairs necessary for his defence, which, however, may be considered fortunate on both sides; for any precautions, without more science than natives possess, could only have protracted the siege; and consequently have increased the slaughter without the slightest chance of successful resistance.

The towns people are said to have shown great indifference to our cannonade, after the two or three first days: but this is by no means surprising considering they are fatalists: and the force of custom even acts powerfully in subduing the fears of those who are not. During the wars of Louis XIV, the inhabitants of Lisle were so familiar with the roar of hostile artillery, that shells bursting round their Theatre, neither interrupted the performance of a comedy, or the attention of an audience to their favourite amusement.

THE FOLLOWING IS A LIST OF KILLED AND WOUNDED.

Commg. 2nd Brigade—Brigadier General Edwards, not expected to live (since dead.)
Ditto 1st do.—General McCoombe, slightly.
Ditto 5th do.—General Paton, severely.
Ditto 23d Regt. N. I—Col. Nation, severely.
Ditto 41st do.—Major G. Hunter, severely.
Ditto 58th do.—Capt. Hunter, severely.
Ditto do. do.—Capt. Black, slightly.
Ditto do. do.—Lieut. Turner, slightly.
Ditto do. do.—Lieut. Lumsdaine severely.
H. M. 14th Regt.—Capt. Armstrong killed.
Ditto do. do.—Capt. Nash, slightly wounded.
Ditto do. do.—Capt. Daly, severely (leg amputated.)
H. M. 59 Regt.—Capt. Pitman, killed.
Ditto do. do.—Lieut. Lane, ditto
Ditto do. do.—Lieut. Pitman, severely wounded,
1st European Regt.—Capt. Davidson do. do.
Ditto do. do.—Lieut. Warren, do.
Ditto do. do.—Lieut. Candy, ditto.
Engineers---Capt. Colvin slightly.
Ditto do. do.---Lieut. Irvine, severely.
Artillery---Lieut. and Adjt. McGregor. slightly.
General Staff---Major Beatson, severely.
Ditto do.---Lieut. Kirk, slightly.
31st Regt. N. I.—Capt. Weperstall, severely.

CASUALTIES BEFORE THE STORM.

Lieut. Tindal, Engineers, killed.
Lieut. Col. Faithful, severely wounded.
Dito. 60th Regt. do. do.
Capt. Smith, Engineers do. do.
Taylor do. do.
Forbes do. do.
De Bude do. do.
Palmer Cavalry do. do.
Chambers do. do.
Lieut. Brook do. do.

The three Artillery deserters were hanged on the evening of the 18th.

In a political point of view, perhaps, few of our military achievements have been more fortunate as to time. or so general in effect. The reputation a of briliant victory, at the moment when a powerful enemy is suing for peace, cannot fail to enhance its value, and hasten its conclusion: while the long vaunted name of Bhurtpore no longer remains the foundation of an insult to our arms, or the encouraging example of security for rebellion and treachery, behind walls, bastions and ditches.

In estimating the advantages of this successful campaign, the suppression of border feuds, is not of least consideration; as bloodshed was annually the consequence of boundary disputes, which were made pretexts for the gratification of personal hatred, arising from difference of religion and a fancied superiority claimed by the Jaats, which was not always readily admitted by their neighbours; amongst whom, the Nawab Ahmud Bukhs Khaun of Ferosepore was perhaps least inclined to submission, as from his warlike disposition and early habits, he neither allowed an insult to be offer'd him with impunity, or resigned that from timidity, which he had a right to defend—As the life of this man has been eventful, it affords many interesting anecdotes, most of which, redound much to his honour, and tend to place his character in strong contrast, with the prevailing opinion regarding Asiatics: and as the wish to secure virtuous transactions from oblivion, may be some apology for the impertinence of digression, we shall venture at a slight sketch of one, which is certainly not eclipsed by many parallels,

Ahmud Buksh Khan, originally of respectable descent, became a soldier of fortune, by the troubles which in his early life, divided families and transfer'd property, in defiance of the ties of blood, and legality of possession; and after following the interests of the Ulwa Raja: he became attached to those of the English, and accompanied Lord Lake through many of his compaigns.

The nature of his services, and general good conduct, gave universal satisfaction; and the General, considering that he justly merited some particular reward from the British government, requested him one day, when dining at his Lordships table, to name that which would be most agreeable to his own wishes; hinting at the same time that an independent territory would not be considered above his deserts. At this period preparations were making, to chastise the Ulwa Raja, for some indiscretion which had given offence to the English; and Ahmud Buksh Khan aware of the misfortunes, awaiting the man whose bread he had eaten, seemed regardless of power and affluence, which were held in prospect, and begged, if he might be allowed to name a boon, that it should be the pardon of his old master.—A request so disinterested and consequently novel, caused no less admiration than astonishment. Lord Lake and all his officers rose from their seats to cheer the generous guest, the Ulwa Raja remained undisturbed in his possessions, and Ahmud Buksh was created Nawab of Ferosepore.

A warrant has arrived from the Grand Masonic Lodge of England, constituting a Lodge in the Dekhun, under the name of Hope; and the worshipful Master appointed, is Brother Anthony Wogan Browne H. K. T.—K. S.—K. E. W.—Grand standard Bearer of the Beau-Sèant (Preceptory of Kilivinning) and secular Grand Cross of the order of Malta.

We regret to state, that accounts have been received, by the *Bark George* which arrived last night in the Roads from Rangoon the 17th Instant, of a severe loss sustained in two attacks upon a Stockaded Position at Setoun to the eastward of Pegue. Upon the occupation of Shewgun by Lieut. Colonel *Pepper's* Detachment, Lieut. Col. *Conry* was sent in advance with the 3d Light Infantry, on the 7th Instant, to occupy the abovementioned Position. The particulars of the attack are not known; but our brave fellows were repulsed after sustaining the loss of Lieut. Col. *Conry*, Lieut. *Adams*, 1 Subadar and 9 Rank and File killed, and Lieut. and Adjutant *Harvey*, Lieut. *Power*, and 19 Rank and File wounded.

Upon hearing of the Repulse, Lieutenant Colonel *Pepper* immediately moved out with a reinforcement consisting of the Flank Companies 1st Madras European Regiment, Head Quarters 34th Light Infantry, (150 Rank and File) with the Flank Companies of the 12th Regiment Native Infantry under Major *Home*. The Stockade was with this reinforcement, carried on the 11th Instant, but not without severe loss: Captains *Cursham*, M. E. R. and *Stedman* 34th Regt. killed. and Colonel *Pepper*, Major *Home* and Lieutenant *Fullarton* 17th Regiment N. I. and *Power* 3d N. I. wounded, besides many Europeans and Natives, the precise amount not known.

The Position attacked is represented as being very strong, situated on an Eminence and resembling the Rangoon Stockade. It was occupied by Troops said to be commanded by the Ex-Rajah of Martaban.

The accounts received refer to Letters of a prior date; but there is every reason to suppose that the attack was made from ignorance of Peace being concluded, and not from any renewal of warfare. Letters received at Rangoon from Prome on the 15th Instant, state that an Instalment of the Crore of Rupees, to be paid by the Burmese Government (as an Indemnity), had actually been received.

Mad. Govt. Gaz. Extraordinary, Jan. 26.

Demi-Official.

Fort William, January 20, 1826.

Despatches have been received from Brigadier Smelt, by the H. C. Steam Vessel *Enterprize*, which left Rangoon on the 13th instant, containing the following highly important intelligence:

It appears, that the Sloop of War *Champion* sailed on the 9th instant, for Calcutta, with Captain Snodgrass on board, bearing Despatches, which announce, that Major General Sir A. Campbell reached Patanagoh on the 27th ultimo, and that negociations were opened by the Burmese Chiefs on the 30th ultimo. A treaty of Peace was agreed to according to the terms dictated by the British Commissioners, and signed on the 3d instant.—The principal articles are stated to be, the Cession of Assam, and its dependencies; of the Four Districts of Arracan; and the Provinces on the Coast of Tenasserim, viz. Yé, Tavoy and Mergui, to the Hon'ble Company, Munnipore to be given to Raja Gumbheer Sing, and one Crore of Rupees to be paid. Stipulations also have been made for the security of the Peguers, who may have joined or assisted us during the war. It was stipulated that the treaty should be ratified by the King of Ava, and returned to the Commisisoners at Maloun, with all the European Prisoners in Ava, and an instalment of 3 Lacks of Rupees on or before the 18th instant. It was expected, that Colonel Tidy would reach Rangoon with the ratified Treaty about the 24th instant, and His Majesty's Ship *Alligator* was under orders for bringing on the Despatches.

Brigadier Smelt reports also that Col. Pepper's column marched from Pegu on the 23d ultimo, and arrived at Shoeegem on the 3d instant, which place he found evacuated, and had succeeded in getting back the inhabitants with their families. On the 7th instant he detached Lieutenan-Colonel Conry, with the 3d Madras N. I. to take possession of Zittoun, where a small force of the Enemy was said to be stationed. They proved, however, to be very numerous and strongly stockaded, and after a most gallant attempt to carry the work by escalade, the Detachment was obliged to retire with loss: Lieutenant-Colonel Conry and Lieutenant Adams being killed, and two Officers wounded, with twelve Sipahees killed and twenty-one wounded. Colonel Pepper was expected to arrive at Zittoun on the following day, and recommence the attack with his whole force, unless he should, in the mean time, receive the orders, informing him of the conclusion of the Treaty of Peace at Patanagoh, and directing his return to Pegu.

The country round Shoeegem is represented as being most beautiful and fertile, and the population considerable. The Sitang river is said to be navigable for boats to Tongho, all the year round.

Cal. Govt. Gazette Extra. Jan. 1826.

BOMBAY RACES, 1826.

SECOND DAY,

ON FRIDAY, THE 3D FEBRUARY, 1826.

FIRST RACE.

A CUP value 100 Guineas, and the rest in specie, 100 Rupees each Subscriber, for Arab Horses, that had never started on a public Course, *Heats* 1½ *mile* 8st. 7lb. each, closed on the Saturday before the Race.

Twelve Subscribers.

Captain Moore's.	C. A. H. Creeper,	2.	2.
Mr. Vibart's....	G. A. H. Barefoot,	3.	drawn
Mr. Jersey's	G. A. H. Slyboots,	1.	1.
Mr. Charles's....	C. A. H. Game Cock,	4.	drawn.
Mr. Gray's	B. A. H. Jonathan,—	distanced.	
Mr. Hickman's..	B. A. H. Johnny Raw,	5.	3.

1st Heat, all the Horses went off at a slapping pace and kept wel! together nearly a mile, when Jonathan fell off altogether, and Johnny Raw to a respectful distance, the others rated it well, but the contest was principally between Creeper and Slyboots, the latter winning in good style.

Time—3. 7.

2nd Heat, 3 Horses only started and went off at score, Slyboots leading all the way and winning in hand.

Time—3. 12.

SECOND RACE.

A Match between Captain Mansfield's C. A. H. Der Freischutz and Captain Moore's B. A. C. Meteor, 8st. 4lb. each, *two miles* P. P.

Both Horses started at an easy pace which they continued past the ½ mile post when they were let out and rated it well together to the 1 mile post, where Meteor shot a head and blazed away in great style with Der Freischutz in his train, winning the race handsomely.

Time—4. 16.

THIRD RACE.

A Match between Captain Mansfield's G. A. H. Phantom 8st. 5lb., and Mr. Robert's G. A. H. Shamrock, 8st. 12lb., *two mile*, P. P.

This was an exceeding pretty Race. both horses went off at score, and rated it well throughout, Shamrock the favorite, was so hard pushed at the end of the 1st mile, that the knowing ones who had backed him at considerable odds felt a little queer: Phantom however only maintained this advantage a few seconds for Shamrock again took the lead and kept it, winning by a couple of lengths.

Time— 4. 8.

FOURTH RACE.

A Match between Captain Mansfield's B. A. H. Don Juan and Mr. E. E. Elliot's B. A. H. Reveller, *one mile*, carrying 8st. 5lb. each.

Time 1. 57.

This was a Race of speed and excited much interest. The Don took the lead at starting and kept it throughout. Reveller ran under great disadvantage having only half an hour before, broke away from his groom and galloped down to the Esplanade.

BOMBAY.

ARRIVALS.---Lieut. T. S. Grant, Engineers.
Captain F. P. Lister, Artillery.
Ensign and Adjt. Hollinsworth, H. M. 20th Regiment.
Lieut. Hunter, 2nd Extra Battalion.
Ensign Alfred Siepherd, 24th Regt. N. I.
Ensign Henry Morse, 20th Regt. N. I.
DEPARTURES.---Ensign J. B. Bellasis, 10th Regiment N. I.
Captain William Spratt, Superintending Invalid.
Captain R. G. C. Paul, 3rd Light Cavalry.
Asst. Surgn. Mr. Taylor.
Captain John Clunes, 12th Regt.
Lieut. and Adjt. Fawcett, 1st Extra Battalion.
Ensign and Adjt. Hollinsworth, H. M. 20th Regiment.
Capt. H. Henderson, 2d Bomb. E. Regt.

NAUTICAL CHRONICLE AND NAVAL REPORT.

BOMBAY.

ARRIVALS.—Feb. 5, Brig Eliza, J. H. Dennison, Commr. from Masulipatam, 21st Oct. Madras and Cochin.

DEPARTURES.—Feb. 1, Ship Good Success, Wm. Poynton, Commr. to China.

5, Ship Lonach, (Free Trader,) Mr. H. Drescoll, Commr. to Tellichery and London.

Do. The H. C. Surveying Ship Discovery, Lieut. G. B. Brucke, Commr. to Persian Gulph.

6. Schooner Mary, T. Bumsted, Commr. to the Coast of Africa.

Passengers by Lonach.—Mrs. Col. Bellasis, Mrs. Col. McDonald and Child, Mrs. Marriot. and Child, Mrs. Norton and two Children, Thos. Warden Esq. C. S. Col. Mark Napier, H. M. 6th Foot, Lieut. Col. Mayne, Dy. Qr. Mr. Genl. Major Morgan, 7th Regt. N. I. Major Cash, Queen's Royal, Major, Tovey, H. M. 20th Foot, Surgn. Arch. Arnott, H. M. 20th Foot, Capt. Graves, Medras Cavalry, Lieut. Robinson, H. M. 4th Dragoons, Ensign Carpenter, 13th Regt. N. I. Rev. Mr. Norton, J. D. Nicol Esq. and 100 King's Invalid.

CALCUTTA.

ARRIVALS.---January 12th Ship Stanmore J. R. Ellis, from China 30th October, and Penang 18th December.

13th Ship Glorioso, William King, from Bombay 18th November, and Point de Galle 9th Dec.

Do. Brig Dotterell, R. Lardner, from Arracan 25th December.

Do. Arab Ship Nassur Shaw, Hajee Abram Caleel, from Bushire 6th September, and Bombay 30th October.

14th Ship Mary Anne, R. Brixey, from Rangoon 23d December.

16th French Ship La Laure, J. Charles, from Bordeaux 24th August.

Passengers per Stanmore, from China :---Mr. Watkins.

From Penang: Mr. Shand.

Per Glorioso from Bombay;---Mrs. Prinsep; Mrs. Clarke; Mrs. Backhouse; Captain Clarke, H. M. 47th Foot; Captain Evans, H. M. 67th Foot; Captain Gillespie. 4th Light Dragoons; Captain Tickell, Bengal Engineers; Captain Fitzgerald 69th B. N. I.; Miss Louisa Clarke; Miss Yates; Master Robert Clarke; Master George Forbes Prinsep; Master William Twenlow. From Mangolore: Mrs. Hazlewood; Dr. Hazlewood, Madras Establishment; Miss Jane Hazlewood; Miss Alicia Hazlewood; Master Robert Hazlewood; Master James Hazlewood.

Per Brig Dotterell :---Mr. J. T. Page, H. C. Flotilla; Mr. Roots, Merchant.

Per Mary Anne.---Captain and Mrs. Milge, H. M. 45th Regiment.

DEPARTURES.—January 9th Ship Mermaid, A. Yates, for Arracan.

10th American Brig Bramin, W. Gould, for New York.

11th Turkish Admiral's Ship Atiet Robo-man, Nacoda, for Judda.

12th Arab Ship Futtal Mayu, Syed Mahomed, for Muscat.

13th Ship Kingston, W. A. Bowen, for London.

14th Ship Charlotte, Thomas Hector, for Bombay.

Do. Cauder Moyden Bux, Hajee Muckeen, for Judda.

Do. Arab Ship Cabras, Ema, for Muscat.

15th Ship John, Thomas Popplewell, for London.

Do. Berwick, J. M. Eilbeck, for Persian Gulph.

Do. Arab Ship Futta Salam, Nacoda, for Bombay.

DEPARTURES OF PASSENGERS.

List of Passengers proceeding to Europe and Madras on board the Honorable Company's Ships Minerva, Princess Charlotte of Wales, and Warren Hastings.

By the Regular Ship Minerva, George Probyn, to Europe:—Mrs. Fendall, Mrs. Nepean, Mrs. Martin, and Mrs. Shearman Bird; James Money, and C. R. Martin, Esqrs. Civil Sevants on this Establishment; Major General Sir Thomas McMahon, Bart.; Captain Whittle, His Majesty's 59th Regiment; and Lieutenant Lillie, His Majesty's 31st Regiment, Children :---Masters Thomas Halcott Fendall, John Fendall, Charles Mathew Martin, William Henry Lowther, and James Bird; Misses Marian D'Oyly Bird, Eliza Budd, Diana Ridge, Jessy Maria Smith, and Emma Russel Turnbull; Thomas Ash, Engineer, and Charles Taylor, Stoker, who came out on the Steam Vessel Enterprize, and are now returning to Europe at the expense of former Owners; Gunners John Blake, and James Farquhar; Recruits James Keil, and three Insane Patients.

Additional List by the Princess Charlotte of Wales, Christopher Biden, Europe:—Mrs. Captain Sneyd, Mrs. Jane Sneyd, Mrs. Elizabeth Webster; Miss Susan Russell. Children :—Masters Henry Wilder Sneyd, Metcalf Sneyd, Nathaniel Robert Sneyd, Samuel Edward Sneyd, William Fane, Thomas Blackall, Robert Blackall, and John Lockett; Misses Anna Marie Jane Sneyd, Eliza Harriet Sneyd, Alice Caroline Sneyd, Louisa Henrietta Sneyd, Jane and Eliza Rebecca Chase.

By the Warren Hastings, George Mason, to Madras:—Mrs. Beaumont and Master John Beaumont.

Per Lord Hungerford, for Madras:—Lieutenant Macan, Bengal N. I. Mrs. Mallet and Child Mrs. Brimmer; Mrs. Jordan and Child; Mr. and Miss Barnes; Captain Jordan, Madras N. I.; Captain Taylor, ditto; Lieutenant Brimer, ditto; Lieut. Smith, ditto; Lieut. Macqueen, ditto; Mr. Pollock, ditto; Mr. Morgan, ditto; Mr. Molony, ditto; Mr. Simpson, ditto; Mr. Morter, ditto Captain Mallet, H. M. 46th Regt.; Lieut. Gray, ditto; and Miss Griffin. For London: Capt. and Mrs. Nunn and Child, H. M. 31st Regt.

Per Mermaid for London :—Brigadier McInnis.

By the Popplewell, for Madras :—Lieutenant Slade, M. M. 54th Regt.

By the Kingston, W. A. Bowen, for London:---Mrs. Harding; Mrs. Colonel Clark; Miss Clark; Mrs. Col. O Brien; Mrs; Davidson and two Masters Davidson; Mrs. Warde; Miss Warde; Mrs. Erskine; Miss Erskine; Mrs. Husband Master Husband; Mrs. Shea; Mrs. Blake a Captain Blake; B. N. I. Miss Wynne; Harding, H. C. Service; Dr. Robinson.

Surgeon; Mr. James Hay, Miss Tulloch, and Master Tulloch; Miss G. Watson; Miss. A. Watson, and Master Rich.

MADRAS.

ARRIVALS.—January 14th H. C. C. Ship Childe Harold, Captain W. West, from Calcutta 8th January.

Do. Ship Coldstream, Captain W. Hall, from Calcutta 11th January.

16th Ship John Bannerman, Captain J. White from Calcutta 1st January.

17th, Ship Thalia, Captain J. Biden, from Rangoon 9th January.

19th, H. C. Ship Warren Hastings, Captain Mason, from Calcutta and Vizagapatan 12th January.

DEPARTURES.—Jan. 15th Ship General Wood, Captain J. Hudson, for Rangoon.

17th, Ship La Belle Alliance, Captain Honner, for Rangoon.

Do. Ship Mellish, Captain W. Cole, for London.

MARRIAGES, BIRTHS, AND DEATHS.

BOMBAY.

MARRIAGE.---On Thursday the 26th Instant, at St. Thomas's Church, by the Revd. T Carr, Acting Archdeacon, Captain William Henderson, 2d Bombay European Regiment, to Miss Liza Millard.

BIRTHS.---At Elichpoor, on the 18th January the Lady of Capt. W. Ledlie, of the 38th Regt. Bengal N. I. of a still-born Son.

On the 20th January, at Asseerghur, Ann Elzabeth, wife of Mr. Conductor George Augustus Houston, of the Commissariat Department, of a Son.

DEATHS.--At Bassador, in the Persian Gulf, on the 30th Nov. last, Assistant Surgeon Wm. Troup, Surgeon of the H. C. Ship of War Elphinstone.

On the 1st Instant, at Bombay, Lieut. Colonel Baker, Commissary General, aged 47 years.

As a public servant he was most zealous, faithful and scrupulous in the discharge of his duties, as a friend the most generous, liberal and kind hearted, in the nearer relations of life most affectionate and confiding, and in all honorable, almost to a romantic extreme. The life of Society, his gaiety of heart was not the effect of want of feeling or Reflection. He was the kindest Master, Friend, and Husband, and was embued with a deep sense of Religion.

To those who knew Colonel Baker these few words will appear unnecessary, and to fall far short of the truth, to those who knew him not, they will convey a very inadequate idea of his Character.

Yesterday Evening, John, the Infant son of Lieut. and Adjt. G. W. Blachley, aged 18 Months.

On the 25th December last, at Cannanore, Mrs. Joana Vaz, by an attack of Epidemic Cholera.

Swift is the flight and short the road;
She clos'd her eyes to see her God.

At Goa, on the 19th ultimo, Major Antonio Pereira aged about 77 years. Major Pereira, was a native of Bombay and proceeded to Goa in the prime of life and there established himself. He rendered important services both to the British and Portuguese Governments in every opportunity when they were called for. His loss is much felt by his friends both at Goa and Bombay.

In the Fort, on the morning of Saturday last the 28th ultimo. Mr. George Goring, Organist of St. Thomas's Church.

On the 28th ultimo, T. H. Binny Esq. Bombay Civil Service.

On the 1st. Instant, Mr. Daniel Robert Leighler, nephew of the late Mr. George Leighler, aged 29 years. after a lingering illness of 10 years, sincerely regretted by his affectionate relations.

On the 3d instant, regretted by his brother officers, Ensign F. Arnaud, of the 22d Regt. N. I. aged 20 years.

CALCUTTA.

MARRIAGES.—At Chandernagore, on the 11th January, by the Reverend J. R. Henderson, G. E. Hudson, Esq. Attorney at Law, to Miss J. E. DeChall, and on the same day and at the same place, by the Revd. J. R. Henderson, E. W. Hudson, Esq. to Miss A. R. DeChall.

At Nusseerabad, on the 15th of December, at the House of Lieut. Phillip C. Anderson, by the Revd. Mr. Palmer, Lieut. Frederic Angelo, 7th Light Cavalry, to Miss Catherine Agden Anderson.

BIRTHS.—At Madura, on the 29th November the Lady of John Horsley, Esq. of a Daughter.

At Ongole, on the 15th December, Mrs. P. A. Vanderput, of a Daughter.

On the 18th December on board the H. C. C. ship Java, the Lady of Professor Craven, Bishop's College, of a Son.

On the River near Buxar on the 30th December, the Lady of Captain J. F. Fuller, of H. M.'s 59th Regiment, of a Daughter.

At Chowringhee, on the 7th January, the Lady of H. Shakespear, Esq. of a Daughter.

At Cawnpore, on the 2d January 1826 the Lady of James Wemyss, of a daughter.

At Barrackpore, on the 11th January, the Lady of George Govan, Esq. M. D. of a daughter.

At Calcutta, on the 12th January, at St. James's School, Mrs. Platts, of a Daughter.

DEATHS.—On the 19th November at Sea, on board the Ship Carnatic, on his passage to Penang, H. B. Scarborough, of the Count Service.

At Cuttack, on the 27th December, Lieutenant J. G. Gordon, 30th Regiment N. I. Son of A. Gordon, Esq. of Belfast.

At Cuttack, on the 3d January, Conductor Owen Greene, aged 36 years, 9 months and 20 days.

At Calcutta, on the 8th January, Miss Ann Elizabeth Perkins, Daughter of Mr. J. R. Perkins Dancing and Music Master, aged 7 months and 8 days.

At Calcutta, on the 8th January, Mrs. Mary Rabeholm, the wife of Mr. C. C. Rabeholm, aged 16 years.

At Calcutta, on the 10th January, Mr. George Hastings Lane, aged 20 years and 8 months.

At Calcutta on the 12th January, Robert Fulton, Esq. late of Mymonsing, aged 65 years.

At Calcutta on the 13th January, Mr. Andrew Jewell, Junior, aged 28 years and 8 months.

On the 15th January, Miss Elizabeth Emma, aged 18 years, 9 months and 22 days, only Daughter of Mr. Thomas Swaine, of the General Department.

MADRAS.

MARRIAGES.—On Monday, the 9th January, by the Revd. G. T. Laurie, Mr. Thomas New, to Miss Harriet Hartley, Daughter of the late Mr. Conductor Mortimer, of the Town Major's Department, Fort St. George.

At St. George's Church, on the 25th Instant, by the Rev. J. HALLEWELL, STEWART CRAWFORD, Esq. of the Civil Service to HARRIET PAGE DYER, eldest daughter of SAMUEL SUMNER DYER, Esq. M. D.

At Arcot, on the 11th Instant, by the Rev. Mr. SMYTH, Serjt. W. HIGGINS, of H. M. 46th Regt. to Miss CAROLINE GRANT, eldest Daughter of J. GRANT, Store Serjt. of Vellore.

BIRTHS.] At the Presidency, on the 21st Instant, the Lady of ALEXANDER JOHNSTON, Esq. of a Daughter.

At Black Town, on Friday night, the 20th January, Mrs. J. M'DONALD, of a Daughter.

DEATH. At Masulipatam, on the 17th Instant, Captain W. JAMES, Paymaster of the Northern Division.

EUROPE.

Mr. Hodgson, in his *Letters from North America* gives the following amusing specimens of American indifference to the Picturesque:—"In the course of my ride," says he, "I had overtaken a respectable farmer, who provoked me a little by his total insensibility to the beauty of the lovely scenes through which we were passing. In vain I exhausted my vocabulary to find a single word which could convey to him an idea of a fine view or a magnificent prospect, unconnected with value. Part of our dialogue was to the following effect: "This is really a beautiful country of your's." "Oh, yes, Sir; the crops are wonderful beautiful, but you should have seen them last year. I reckon there's not a more beautiful valley in America, at least for wheat: and it's considerable of a corn country," "Yes, it seems to possess a rich soil; but I was not alluding to its fertility—I meant that it was a fine country to look at: that you had some very fine prospects." "Oh, yes, Sir; I would not wish better prospects, if this weather does but hold till harvest; last year our prospects were not half so good, and we got in abundance." "I see my friend, we don't understand one another yet. I meant it was a handsome country, as you call it, I believe: look how finely the land waves just under that mountain." "Yes Sir; the water runs off as if it was all drained; but its mighty bad for the plough." "Well, my friend, I suppose I must say that it is an elegant country. What an elegant view we have just now to our right "Yes, Sir, that belongs to Mr.——, that you are going to to-night; it's right elegant land, and would bring 50 dollars an acre to-morrow and he has 1,500 acres, all near as handsome under wheat and corn.

"ENGLAND FIFTY YEARS AGO."

In seventy years the people of Great Britain have advanced full eight millions. In twenty-five years, the number of inhabited houses in England and Wales alone have advanced one-half. Fifty years ago, the very existence of canals was a matter of incredulity. Fifty millions of public wealth have now been profitably absorbed by these mighty ducts; and at least half as much more is at this hour destined for their formation. Fifty years ago, there was hardly a steam-engine in the kingdom. There cannot now be less than twelve thousand; a creation of power equal to at least quarter of a million of horses; an energy which, in a single day, would have raised up the great pyramid of Egypt. Fifty years ago, our annual export of manufactured cotton did not amount to a quarter of a million in value. It has now swollen to nearly thirty millions. In the same period, our exported woollens, in defiance of Saxon, Prussian, Spanish, & American competition, have advanced more than two millions. Fifty years ago, our imports of raw silk were only three thounsand pounds in weight. They are now nearly three millions. Fifty years ago, our export of iron

was hardly twelve thousand tons. It is now about ten times as much. Fifty years ago, our exports of linens were about four millions of yards; they are now nearly forty millions. Fifty years ago, the whole value of our exported produce, both native and foreign, was just fifteen millions of money; the value of British produce exported, alone, is now more than fifty millions. A hundred and fifty years ago, says old Tucker, there were only two or three vessels in Scotland above two hundred tons; our whole tonnage is now more than a quarter of a million, employing twenty thousand souls. A hundred and fifty years ago, says Chalmers, the navy of Britain did not amount to a hundred thousand tons: it is now at least three millions of tons employing about two hundred thousand souls.

Military Anecdote.

"*The Old Guard never surrender —they die!*"

(FROM A CORRESPONDENT.)

Soon after the occupation of the French metropolis by the allied armies under the Duke of Wellington and Prince Blucher, after the memorable battle of Waterloo, some British and Prusian officers happened one afternoon to meet at a coffee-house where some French gentlemen, sitting at the further end of the room, were warmly discussing the subject of the late unfortunate conflict, some attributing the disaster to treachery, others to the vast superiority of the enemy's force, &c. &c.—Two of the noisiest and most violent of these disputants happened to be officers in the Old Guards, though at that moment not in uniform, which was also the case with the guests above mentioned who had just entered the room. "No matter," exclaimed the turbulent Frenchmen, "though defeated, we are crowned with immortal honour; never troops fought better, and the answer of the Old Guard to which we have the honour to belong deserves to be recorded in letters of gold." On being summoned to surrender they exclaimed, "'*The Old Guard never surrender—they die.*" Such an answer is only to be expected from French troops, who are animated by the soul of honour, and with whom no soldier in the world is worthy of a comparison." The British and Prussian Officers listened with attention for some time to this rhodomontade, till, their patience being exhausted, a Prussian Capt., perfect master of the French language, rising with much gravity, goes up to the table at which the Frenchmen were sitting, and falls down on his knees in a posture of adoration, calling aloud to all the company present to imitate his example." Gentlemen," cried he, "how can you sit with such indifference in the presence of departed spirits? Down on your knees and do them homage!" Then addressing the Frenchmen, "Illustrious shades," he continued, "how long is it since ye left the elysian fields? It must have been lately, for the battle in which ye were slain was fought but three weeks ago. How fare all the illustrious heroes and worthies of ancient and modern times, the Allexanders, Cæsars, Hannibals, Fredericks, Turennes, Marlboroughs, &c. &c.? How enviable is your lot to dwell in the fields of bliss with such spirits, to all eternity! What could induce you so soon to quit the regions of happy souls, again to seek the realms of night and misery? No doubt some high commission from Jove. Oh! speak, and leave us poor mortals no longer in suspense."

The Frenchmen regarded the Prussian Captain with looks that plainly declared their inability to comprehend the meaning of what he had been saying; at length their loquacious prolocutor requested he would have the goodness to explain himself, since his speech certainly betrayed rather the ravings of disordered intellect than any thing else; "but if you aim at an insult, Sir," he added, "be you who you may, I demand instant satisfaction." "What! then" exclaimed the Prussian, "you are really not departed shades just arrived post haste from Paradise, but mere men of flesh and blood like myself." Then rising from his knees, he added, "as to the insult you speak of, Sir, I am willing to answer it at any time and place you may be pleased to appoint, provided you really think the lesson I intend giving you an attack upon your honour. We are Prussian and British Officers, continued, he turning to his companions, and have been listening this half hour to your effusions of vanity. You are, it seems, Officers of the *Old Guard, who do not surrender, but die.* Now it is clear in that case that you must be *dead men*, since you could not think of surrendering. Should I, however, err in my conjecture, and really have the honour of conversing with *living* Gentlemen, I have only to request that in future you will have the goodness to add a few words to your panegyric on the Old Guard, and say, the *Old Guard never surrender; they either die or—run away.*—*Courier, July 22.*

Parliamentary Intelligence.

House of Commons, Thursday, June 9.

Discipline of the Navy.

Mr. Hume rose to submit the motion of which he gave notice, respecting the practice of flogging in the navy. He had intended to move for a committee on the subject of impressment and flogging; but he was new induced to alter his plan, and move for leave to bring in a bill to prevent impressment. If he could point out a mode by which the navy might be recruited by volunteers, as the merchant service, he trusted the house would concur with him in thinking that it would be most desirable that the unconstitutional practice should be dispensed with. He would, if the house gave him leave, bring in his bill, and have it printed, in order to have it stand over for consideration, to be taken up next session. His bill would prevent the practice of impressment, except in cases of great emergency. He had consulted with several naval men on this subject, and it seemed to be the general opinion that the means might be devised for placing the navy on the same footing as other branches of the force of the country, as far as respected the facilities of keeping up the necessary strength by means of voluntary entry. One great cause which prevented this, was the power exercised of punishing seamen at the discretion of one man. That was a source of the great injury to service. He did not see why seamen should be subjected to such arbitrary punishments more than other persons employed in the defence of the country. No man was ever flogged in the army until his conduct had been thoroughly sifted by a court-martial: why was a seamen to be placed in a different situation? Why was the one service to be freed from the influence of punishment at the caprice of their officers, and the other to be exposed to it? He could see no reason in the world why the same rule should not be extended to both services. He understood that in some vessels containing from 200 to 600 men, as for instance the *Bulwark* and the *Dictator*, it often happened that there was not a single man flogged for six or eight months; but in other vessels he knew that men were flogged almost daily, with a severity which to him was quite inexplicable. If no capricious punishment was allowed to be inflicted in the army, by parity of reasoning there should be some security afforded to the seamen that no capricious punishment should be inflicted in the navy. Ministers, during the last session of Parliament, had exerted themselves very laudably to prevent arbitrary power being wantonly exercised over the slaves in Trinidad. They had issued an order in council on the 10th of March, 1824, limiting the number of lashes to be inflicted on any slave in one day to twenty-five: declaring that even that number should not be inflicted until twenty-four hours after the commission of the offence for which he was punished, and awarding a definite penalty to any individual who should dare to act in violation of those provisions. Why were not the seamen of the country placed under similar protection? Why were not the nature of their offences defined and punished by law? Why was not some enactment made to prevent them, not only from being unduly punished at all until the irritation of the moment had subsided? He knew instances where officers had punished men countrary to the rules laid down by the Admiralty; and what did the house think that the Admiralty did when such conduct was reported to them? Did they punish the officers? Oh no, they merely admonished them to be more cautious in future. To show how severe the punishment inflicted in the navy were, the hon. member read two statements to the house, which he said the individuals who had sent them to him were ready, if they might be permitted, to make good at the bar of the house. The first related to circumstances which had taken place 20 years ago (a laugh), and the last to circumstances which occured only last year. The hon. member then read a long statement from a sailor who said that he had joined the *Howe*, Captain Cockburn in the year 1805 at some port in the East Indies; that had not been many days on board before a marine received four dozen lashes because his musket had hung fire; and a veteran seaman as many more, because he remarked in conversation to the master at arms, that in all the 35 years during which he had been at sea, he had never seen so cruel a punishment inflicted for so trivial a cause; that during all the time he had remained on board the *Howe*, similar punishments were frequently inflicted, and that the feeling of all on board were harrowed and disgusted by them. The honourable member then read another statement, containing an account of the

punishments inflicted on board of one ship in the course of the year, from which it appeared that by far the greater part of its crew had been personally punished in some way or other. He described the punishment of *stating* to the house, and the circumstances under which it was generally inflicted; and then asked whether it was too much, under such circumstances, to ask for the interposition of Parliament? He could mention many cases in which the severest punishments had been inflicted upon seamen for trivial offences; but he thought that the mention of a single instance of oppressive punishment was sufficient to warrant the house to interfere, and prevent its recurrence. So much of the manner in which flogging was inflicted in the navy. It was his object to put an end to it without a court-martial, and leave the seaman in the same situation that the soldier was in at present. It might be asked, why had he brought this subject before the house, when there were so many naval officers in Parliament who must be better acquainted with it than he was. The reason was that though few naval officers could be found to defend the present practice, none of them chose to put themselves forward to put an end to it. Some of them, from the habits of early education, were enamoured of the practice: others looked at it with a leniest eye; and many more of them durst not express the opinions they entertained regarding it, lest by so doing they should, as an hon. friend of his had said on a former occasion, be obliged to turn their stern upon the Admiralty. Another object of his bill was to limit the period of service in the navy to seven or ten years, according to the plan which Mr. Windham had introduced into the army, and to give to every seaman who had served that period, a certificate of such service to secure him in future against impressment, though, in the altered system which he wished to introduce, he thought that impressment would be unnecessary, as the navy would be always filled with volunteers. There was no difficulty in getting mariners, though they were subject to the same laws, discipline, and punishment as the sailors, in consequence of their receiving a bounty on their enlistment, and of their being enlisted only for a limited period. Under such an alteration as he proposed, he anticipated that in future there would be as little difficulty in procuring seamen. The rate of wages in the navy, he complained, was not commensurate with the rate of wages in any other service. Seamen at present received in the merchant service 3l. 10s. per month; but in the navy they only received 34s. per month. He thought that, even with these disadvantages, men would prefer serving in the navy to serving in the merchant's service, if the arbitary power of flogging were taken away, and if the other measures which he recommended were carried into execution. Sailors, owing to the hardships to which they were exposed, generally suffered under a premature old age, and he would therefore recommend that pensions should be granted to them proportionate to their length of service. If a pension of 7l. or 10l. a year were granted to a man after he had served ten years, it would be received by the navy as a boon of great importance.. [The symptoms of impatience which pervaded the house and rendered the honourable member's speech in many parts inaudible in the gallery, here became so strong that he stopped to notice them.] He perceived that the house received these matters with much indifference: he was sorry for it, and could only attribute it to one cause—that the house did not know the constant hardships to which a sailor was exposed. He contended, that as a recompense for those hardships, the house ought to do two things for the sailors—it ought to give them pensions proportioned to their length of service, and to alter the present distribution of prize money. Was it right, he would ask, that when a prize was taken, the captain's share of the booty should be equal to that of the whole of the crew put together? The officers should not be taught to look upon prize money as an inducement to enter the navy; but the men, he contended, should. Of all future prizes he would give six-eighths to the men, and would leave only the other two eighths to the officers. The Marquis of Hastings, and the other officers of our Indian army, had abandoned the whole of their prize money to their men: and he would advise the officers of the navy to follow their bright and glorious example. If such altereations were introduced into the naval service, he would underkake to say that, let war come when it might, they would have as many seamen as they wished to man their fleet without impressment; but as an emergency might arise, in which it would be impossible to wait till volunteers were collectd, he would have such a register kept of all the seamen in the country as had been prepared 150 years ago, and with this additional proviso—that every man at sea should be liable to serve for five years in his Majesty's navy, just as every man on shore was liable to serve in the army for the same time. The hon. member, after some further observations to the same effect, concluded by asking leave to bring in a bill containing the details of the measure of which he had stated the outlines to the house. He would not attempt to press it further this session, but would have it printed for the consideration of members during the recess of Parliament. He then moved that "leave be given to bring in a bill to amend the 22d of Geo. II. cap. 35, and to make a provision for the encouragement of seamen, and for the more effectual manning of his Majesty's navy."

Sir F. BURDETT seconded the motion.

Sir G. COCKBURN commenced his observations by complaining of the want of courtesy which the hon. member for Montrose had exhibited towards him in bringing forward a personal attack upon him, without giving him any information of his intention to do so. Had he received notice of the hon. member's intention to make a direct charge upon his conduct, he would have brought the necessary documents from the Admiralty to refute and repel it. He trusted that the house would recollect that 20 years ago the discipline of the navy was different from what it was at present; and yet at that very time, he had on board of his own ship made an order against "starting." and had absolutely quarrelled with a gentleman, who had since quitted the service, for the "starting" the men without his permission. If the hon. member for Montrose would mention the names of the individuals who were said to have been punished as he described, he would in all probability be able to tell him the real offences for which they were punished. (Hear, hear.) As it was impossible for him to make such statement at present, he would confine himself to this observation,—that he had never inflicted any punishment, while he was in the service, except in the presence of his officers, or without inquiring into the nature of the offence which had been committed. With regard to the bill which the hon. member asked leave to introduce, he would now beg leave to say a word or two. The reason alleged by the hon. member for bringing it in was, that the seamen were so ill-treated in the naval service of the country that they had a strong dislike to it. The statement, however, of the hon. member went along to disprove his own argument, for he had told the house that sailors were now procured for the navy without impressment, though they received only 34s. per month in the King's service, 3l. 10s. per month in the merchant service. He then explained what was the nature of the retiring allowances for seamen, and warrant officers, after their periods of services for 12, 14, and 21 years, which he deemed to be sufficient, and denied that the hon. member was borne out in his comparison between the army and navy. The army were enlisted for life, the navy for a limited period, and liable to be paid off every three years; and so far from the general tendency of the commercial marine being to induce a preference for that service to the injury of the navy, as the hon. member seemed to suppose, the fact was the reverse, for the Admiralty, on the application of the merchant service, had repeatedly written to officers on foreign stations to discourage their enlisting seamen from the commercial marine, unless it became absolutely necessary, from the urgency of the public business. And, indeed, this was done by the Admiralty, contrary to an old statute, which, for the purpose of encouraging the navy at the expense on the war marine, abrogated their private articles upon entrance into the King's service. When the hon. member argued upon the analogy of courts-martial, between the service of the army and navy, and insisted that no punishment in the former could be inflicted without such court, he omitted stating that when the army were actually engaged in the field, there was a proviso that punishment could be inflicted by the commander-in-chief's order to the provost-marshal. Now he would ask, whether the general service of the navy at sea did not resemble that of the army in the field, and whether the power of discipline ought not to be allowed to the one, as to the other? A ship, for instance, sailed upon a three years' voyage round the world, and it was impossible to have a court-martial on board. What then to be done? Was the offender to be kept in irons all that time, or even to be kept in custody; and what other alternative had the capt. for punishing the want of discipline in his ship? This was the ordinary case of the navy, and did it not resemble the case provided for the army in the field? The captain must in these cases abandon the supreme command of his crew, and the necessary enforcement of discipline, if the hon. member's motion received the sanction of the house. (Hear.) Let it not, however, be understood that the Admiralty held out any encouragement to the infliction of corporal punishment; on the contrary, they called for returns of its infliction, and he could give no better proof of the moral discipline of the navy than to say that these accounts were transmitted from the service as often blank as full; and he could assure the house, that the Lords of the Admiralty marked with peculiar approbation those officers who had maintained discipline without resorting to coercive means. But of the necessity of the existence of this principle he had no doubt: indeed, it was recognized by the courts of law in a recent case, in which a captain of a merchant vessel was declared justified in the infliction of corporal punishment, for the due maintenance of the discipline of his ship. Were they then prepared to deny to the navy, that which they

were ready to confer upon the commercial marine? All he could say was, that if they did, they would strike altogether at the root of the discipline of the King's service. Then, as to the hon. member's argument about impressment, all that the Admiralty wished was, to prevent as much as possible the necessity of resorting to impressment, but nothing would be more impolitic than to abrogate their power of doing so, considering the deep responsibility which was vested in the Government. It was the commercial marine which kept up a nursery for the war servieece; and unless the house was prepared to keep up in time of peace a maritime strength, which the sudden emergency of war might call forth, he was at a loss to see how the public service could at such a crisis be adequately provided for. He could positively say, that the service of the navy was never upon a better footing than it was at this moment; and he could with equal confidence declare, that the principle of the hon. member's motion was calculated to interfere with the essential maintenance of due discipline: all he would say in concluding his opposition to the motion was this—that the hon. member had entirely mistaken the meaning of the 36 articles of war, when he limited the power of inflicting corporal punishment to the operation of the 36th. All who attentively looked at them would see that the power was expressed in the previous articles, even to the penalty of death; and that the 36th article merely mitigated the punishment in certain cases not before expressed.

Sir W. De Crespigny was under the necessity of thinking that the discipline of the navy could not be maintained without confiding the power of corporal punishment to the discretion of officers.

Sir Isaac Coffin rose amid loud cries of "Question." He remarked, that he had some claim upon their attention, for never in his life had he spoken ten minutes together. (A laugh..) All he had to say was, that this motion was not only unnecessary, but mischievous; for it went to cast a slur upon the character of the officers of the navy, which was most unfounded. Indeed, his hon. friend (Mr. Hume) was no seaman, and he would recommend him not to meddle in this sweeping way with their duties, but rather to remember the adage—*He sutor ultra crepidam.* (A laugh.

Mr. Robertson declared his conviction, founded upon practical experience, that the discipline of the navy could be maintained without the infliction of degrading corporal punishment. He had himself commanded ships in the Indian trade as large as vessels of war, and had often navigated them with a mixed crew, sometimes with only three real sailors fit for their whole duties, and yet he had done this without resorting to so severe a punishment. (Hear.)

Sir Joseph Yorke said, that his hon. friend who had last spoken was greoter than all the great men that had ever flourisshed in the navy; he was the very *Soʻon* of the sea, and ought at once to change his clothes and put on a full admiral's uniform (laughter), never did man deserve it better. To navigate a ship like a man of war, with only three good navigators among the crew, was the greatest achievement he had ever heard of, and to his hon. friend ought henceforth to be given the trust of wielding in the highest rank the thunders of the British navy. (laugh). Then as to the mode of conducting naval courts-martial, or even the solemnity of inflicting punishment, he could declare that the business was always done with as much system, scrutiny, and form, as characterized civil proceedings at home. How, then, could it be said that men of valour and honour were prone to severity and oppression? Were naval officers in general men of an unfeeling nature? were they less sensible than other men of the influence of reason and humanity? and how but upon the notion of their insensibility could such a question as this be supported? (Hear, hear.) As to the crews, he did not deny but some two-thirds were good—of others in the remainder he would, however, from his professional experience declare, that so far from moral lectures about personal character operating upon them, they might as well talk to pigs. (A laugh.) Some of them were as insensible as brutes, and bore their floggings accordingly; indeed, they were classed as formerly the hard drinkers were—(he was glad the practice was on the decline in the navy)—there were the five-dozen men, as there had been the five-bottle men (A laugh.) His firm persuasion, however, was, that the existing discipline, or at least the reserved power of inflicting it, could not be abrogated. (Hear, hear.)

Sir F. Burdett said that the subject before the house was one of a highly serious nature, involving matters of great national importance. However brilliant the faculty of wit might be which any member possessed, it could not be well displayed on so grave an occasion. To say the least, there was no good taste in showing oneself facetious upon questions which affected the sufferings of others, though it might be next to impossible among those who were listening to prevant the feeling of mirth. The best defence which could be set up for such jocularity was, that the speaker, like the gallant admiral who had just sat down, had been carried away by the flow of animal spirits. Now, as he understood the question, his hon. friend near him merely proposed to do that which had been the declared opinion of many able and intelligent men who had written on the subject during a long time past; the alteration which he proposed had been over and over again recommended by captains, commanders, and other experienced persons; nor had one single statement of his honourable friend received the slightest answer from the gallant admiral who had undertaken that task. His hon. friend contended that there was no necessity to engage force on the side of Government to man the fleets, if they would only proceed by the known motives of human nature—take the fair course which prevailed in other cases—viz. by holding out suffcient inducements for those who were to be invited by them to face the dangers and encounter the perils which hung upon the lives of those devoted to the maritime defence of the country. What was there to which any man could scriously object in this? And on what a mistimed occasion did the argument of public economy, the only one which could be rationally opposed to it, occur? The ministers were pompous & swelling in their description of the growing resources and increasing mercantile prosperity. To hear them talk, one might be led to suppose that the country and the treasury were overflowing with wealth, and that the chief difficulty was in fiding proper objects on whom to bestow it. No necessity had been shown, no statment advanced—there was no pretext, not even the least colourable, for augmenting to a great, a really monstrous amountt the income of the judges. It was only natural, and that which must follow, to make a corresponding addition to the salaries in every other office. At such a time it seemed very strange that the house should refuse at least to consider the means of rendering the sea-service, the most useful to the country, the most arduous, and the worst requited, more inviting to the community—to see if means more effectual and more just might not be resorted to for obtaining men, than that of violently forcing them from their families, and heaping upon their guiltless persons the accumulated horrors of imprisonment; for in this was the great mischief, to which flogging was but a necessary corollary. Men taken by force and injustice into a toiling and dangerous pursuit, could only be kept down to the level of the discipline by other methods which were equally revolting to humanity. What then did his hon. friend propose? He merely said, "Let me, after well considering the subject, make one endeavour to show how you may get rid of all these evils, which every one of yon must equally with my self deplore, by bringing in a bill." There needed no questions to be asked; the subject was fully known; all the world was acquainted with the shocking nature of the naval discipline and punishments. There was nothing wanting—there was nothing asked, but the liberty of bringing the propositions of his hon. friend before the house, for their adoption or rejection, as best suited themselves. The gallant admiral had treated his hon. friend as if he were incapable of comprehending these questions of practice—as if he could not be supposed equal to an opinion upon matters of fact. His hon. friend had proved too often his power in that way to make a formal justification necessary. Ministers knew, and so did the gallant admiral, that the head of his hon. friend was full of very useful facts; for he must have surprised each of them in their turn with the knowledge which he evinced of facts connected with their various departments. But to return to the subject. His hon. friend proposed to take from the officers of the navy the dangerous powers of coercion which they had hitherto held How shocking was the idea of a beardless boy chastising a veteran seaman of a gallant and unquestionable character! The gallant admiral had made it a part of his case that 35 out of 36 of the articles of war declared death. Who could doubt but that to an honorable and brave man death would be preferable? His hon. friend did not propose to loosen the discipline: he only wanted to secure to the officers of the navy a time of reflection between ordering the punishment and executing it, that they might not do that in the heat and hurry of their feelings—an error to which the best as well as the worst minds were liable—which their cooler reason would condemn. For this purpose he had proposed more formal proceedings in naval punishments. He was reminded, however, of the power of the provost-marshal, when he had adverted so the milder discipline of the army. The provost-marshal was authorized in the march of an army to order any man who had flagrantly broken through the discipline, to be hanged up. But the difference of circumstances which could alone justify the exer-

cise of that power was left out of the question. A General marching through a foreign country with an army, for the conduct and preservation of which he was answerable to his Government, might be compelled to do that which nothing but the absence of all law and established regulations could; justify. Besides the offences, whatever they might happen to be, would be committed in the face, or within the immediate knowledge of the troops; no doubt of the facts, no question on justice, could intervenre to do away with the paramount necessity of good order and obedience. But if the provost-marshal, under other circumstances than those, were to exercise that power,—if he put it in force when plenty of time might, without inconvenience, be taken to clothe justice with her proper insignia, who could justify the act of the provost-marshal then? To bring in his case was literally asking to have that which ought to be limited by rules left all discretionary, because, in another case, there was discretionary power necessarily left in some cases out of a system actually limited by rules. A more modest and unobjectionable motion than that of his honorable friend could not be made. The labour was all his own. He wished to acquaint the house with the effect of what he had discovered. The failure of the motion, if it were rejected, would be his, and all the ridicule and obloquy of defeast would he his. Under these conditions, he wished to be allowed to offer something for the public service. In this he was assisted by the testimony of an hon. member opposite, who told the house that he once commanded an India ship. The statements which he had made were not to be done away by any rough and boisterous, ridicule, come from whom it might. That hon. gent. had told the house of an instance of working a slip home with a diminished number of men, who were of the worst and most degraded order of seamen, and must therefore be supposed the less capable of being controlled, without the aid of those punishments and that force which were held to be necessary for the national sea service. As to the plea of the navy having a portion of wretches among them whose principles and conduct could not be subdued without the roughest discipline, the answer was plain—they ought not to let such persons into the navy any more than they were allowed to be in the army. For what was the effect of it but to degrade and subject the honest, honourable, gallant men of our fleets to the low and brutallizing condition of the discharged felons? God forbid that he should have any other view than that of giving equal advantages to the officers: the country could not find means to reward them in a way equal to their actions. He would have their age provided with whatever was benefit to their ease and comfort, and they should pass the remainder of their lives, after bleeding for their country, in honour and happiness. He was of opinion that the country was able to do all this, and provide men also, without having recourse to that home slave-trade—the impressment—far worse, in his mind than the Africa slave trade, and, as his hon. friend, was prepared to prove with many able and experienced writers who had gone before, more easily to the country in real pounds, shillings, and pence than would be the fair rewards, and compensations, and bounties, which would be necessary to render the service a desirable object to that class of the people. One thing was clear—the motion would do good whether granted or not. His hon. friend had laid his plan before the house, and the effect of all such motions was to diminish the evils. It was now admitted that formerly there did take place, under pretext of discipline, acts of a most unjustifiable nature. He gave the Admiralty full credit for the steps which they had taken in the line of improvement: but it seemed to be with Government as with some other great philosophers--they required the diligence of flappers continally about them. Parliament might get a little good out of them, but they must not forget the flapper. He hoped that his hon. friend would be allowed to bring in his bill. He had heard no argument of danger or inconvenience to prevent it. The gallant admiral who was so witty was no less visionary in his notions—they were perfectly groundless. He stuck, however, upon the fair reward and advantage of the officers. No men had ever deserved better—none had ever done so much perhaps for the glory of their country. He thought the reference of the gallant admiral to the 35 articles which decreed death was by no means happy for his purpose. To be sure, if there ever was a method devised for making and keeping a system not only in operative but loathsome, it was to write death, death, death, to all varieties of offences which did not deserve it, and upon which it could not be visited. The gallant admiral objected to the Solon of their side of the house. He had much reason to say to the gallant admiral "Take away your Draco code, which, by your own admission, is too bloody for any occasion."

Sir GEORGE CLERK said, that there had been no case made out by the hon. mover to justify the house in allowing him to tamper with a subject so serious as the existence and welfare of the navy. If the hon. gentleman could succeed in repealing among the articles of war the one to which he objected, he would not be much nearer his object, for he must then move for the repeal of the act of Geo. II. upon which they were founded. The endeavours to assimilate naval with regimental courts martial was obviously improper, because of the necessary authority which must be left, for safety as well as discipline, with the several officers of the ships. The idea of lessening the severity of the discipline by it was altogether erroneous. The inferior officers caused most of the punishment to be inflicted by the complaints which they found it necessary to make from time to time to the captain, who used his own discretion in remitting or moderating them. If this discretion were taken away, the punishments would be more formally adjudged, and consequently more positively enforced. As to giving the officers time, 24 hours or more, to reflect upon what was going to be done, in 99 cases out of very 100, much more time elaped. The punishments were conducted with the utmost solemnity; the whole crew were called up to witness them. As to a strippling having the power to flog an old veteran's gallant honourable seaman, undoubtedly if that were to happen, the young gentleman be sent home. The house must look at the delicate situation in which a captain was placed with the health, lives, discipline, and property which he had to protect. Then they must consider the nature of the offences by which that discipline was infringed---principally arising from drunkenness and theft. The number who must be kept in irons on some occasions, with others who must guard them, would make the hands scarce for navigating the ship. The captains were subject to the control of the Admiralty, who carefully examined into their books once a quarter. The first part of the plan of the hon. gentleman, for raising the wages was unnecessary and impolitic. They could always get seamen at lower wages than the merchants could get them; so that the only effect of raising the wages in the navy would be to raise the wages of the merchant service. As to the argument which the hon. gentleman derived from the fact that there was no flogging on board the *Bulwark* for a certain portion of time, it would be just as good to say, that because in one assize town there had been no execution, therefore the penal laws for inflicting capital punishments ought to be done away. As to limiting the term of service and awarding pensions, that had been done ten years ago; and a seaman who had served twenty seven years could claim his discharge, and 1s. 6d. per day for the rest of his life: a petty officer, under the same circumstances, would be entitled to 45l. a-year. In altering the distribution of prize-money, the justice of the case was not so clear. A captain took a prize at considerable risk to himself, because if the vessel were not condemned in the Admiralty court as lawful capture, according to the law of nations, he might be called upon for restitution. What captain, under more disadvantageous conditions, would encounter such a risk? The arguments of his gallant friend were conclusive—they ought not to tamper with a system under which the navy had prospered for so long a time.

Sir F. OMMANEY said that the hon. member for Aberdeen had persuaded the house to repeal the combination laws, and now every town in the kingdom swarmed with insubordinate workmen standing out against their employers. He complained of the injustice done to all the gallant officers of the navy by this motion. As to prize money and wages, it was quite plain that the seamen and petty officers had more by half than they could spend. He was sure of the fact, and so must his honourable friends be, if they had ever been at a seaport, for there half the houses were engaged in selling gin and rum to the sailors.

Mr. HUME replied. He had shown the whole of his plan at the commencement to the house. If any man would say, that in his opinion impressment ought not, if it could be, done away, to that man he would have nothing to say. He pledged himself to show to all the rest that there was the greatest inconvenience and expense in retaining it. The militia were bound to serve for five years. Why should seafaring men object to the like term of five years? They would not object to it: and here would be found at all times adequate means of naval defence. He complained of the gallant admiral who spoke last, having misled the house by inducing them to believe that every seaman was entitled to a pension. After 21 years a seaman might claim a pension, but for any shorter period or upon a claim for retiring in consequence of wounds, the Admiralty used their own discretion. In 1777 Mr. Luttrell had made a motion of this kind in the house, and withdrew it, upon an understanding from Government that they would do away with impressment forthwith. From that time to this, it had unceasingly prevailed, whenever the country was embarked in war. He had heard nothing to prevent him from dividing the house.

Mr. SYKES had lived many years in a seaport, which had given him a correct knowledge of the horrors, and crimes to which impressment gave rise. The town was commonly shaken with riots, growing out of this cause, though rarely by any other. Perjuries were multiplied, to exempt individuals from the hardships of the service. A little boy got three fingers chopped off, by accident, from his right hand. His father congratulated himself that the child, when grown up, would not be pressed into the service. It was a system, taken together with flogging, altogether loathsome, brutalizing, cruel, and impolitic.

The house divided—

Against the motion, 45 | For it, [illegible] Majority 22.

Additional Experiments and Observations on the Application of Electrical Combinations to the Preservation of the Copper Sheathing of Ships, and to other Purposes. By Sir Humphry Davy, Bart. P.R.S.*

From the Philosophical Mag. No. CCCXXIII.

I have already had the honour of communicating to the Royal Society the results of my first researches on the modes of preventing the chemical action of fluid menstrua, such as saline solutions, or sea-water containing air, on copper, by the contact of more oxidable metals†.

For some months I have been engaged in a series of new experiment on this subject, so important to the navigation and commerce of the country: and through the liberal and enlightened views of Lord Melville and the Lords of the Admiralty, who desired the Commissioners of the Navy Board and of the Dock-yards to give me every assistance in their power, and all the facilities which our magnificent naval establishment at Chatham and Portsmouth furnish, I have been enabled to conduct my operations upon a very large scale.

At this advanced period of the session, it will be impossible for me to give more than a very short notice of experiments which have been tried under a great variety of circumstances, and the details of which would occupy some hours in reading; but I cannot deprive myself of the pleasure of stating the satisfactory and conclusive nature of the results, many of which have even surpassed my expectations.

Sheets of copper, defended by from $\frac{1}{40}$th to $\frac{1}{1000}$th part of their surface by zinc, malleable and cast iron, have been exposed, for many weeks, in the flow of the tide in Portsmouth harbour, and their weights ascertained before and after the experiment. Where the metallic protector was from $\frac{1}{40}$ to $\frac{1}{110}$, there was no corrosion nor decay of the copper. With smaller quantities, such as from $\frac{1}{200}$ to $\frac{1}{400}$, the copper underwent a loss of weight which was greater in proportion as the protector was smaller: and as a proof of the universality of the principle, it was found that even $\frac{1}{1000}$th part of cast iron saved a certain proportion of the copper.

The sheeting of boats and ships protected by the contact of zinc, cast and malleable iron in different proportions, compared with those of similar boats and sides of ships unprotected, exhibited bright surfaces, whilst the unprotected copper underwent rapid corrosion, becoming first red, then green, and losing a part of its substance in scales.

Fortunately, in the course of these experiments, it has been proved that cast iron, the substance which is cheapest and most easily procured, is likewise most fitted for the protection of the copper. It lasts longer than malleable iron or zinc; and the plumbaginous substance which is left by the action of sea-water upon it, retains the original form of the iron, and does not impede the electrical action of the remaining.

I had anticipated the deposition of alkaline substance in certain cases upon the negatively electrical copper. This has actually happened. Some sheets of copper that have been exposed nearly four months to the action of sea-water, defended by from $\frac{1}{35}$th to $\frac{1}{80}$th of their surface of zinc and iron, have become coated with a white matter, which on analysis has proved to be principally carbonated lime and carbonate and hydrate of magnesia. The same thing has occurred with two harbour boats, one of which was defended by a band of zinc, the other by a band of iron, equal to about $\frac{1}{25}$th of the surface of the copper.

These sheets and boats remained perfectly clean for many weeks, as long as the metallic surface of the copper was exposed; but lately, since it has become coated with carbonate of lime and magnesia, weeds have adhered to these coatings, and insects collected on them: but on the sheets of copper defended by quantities of cast iron and zinc, bearing a proportion below $\frac{1}{150}$th, the electrical power of the copper being less negative, more neutralized, and nearly *in equilibrio* with that of the menstruum, no such effects of deposition of alkaline matter or adherence of weeds have taken place; and the surface, though it has undergone a slight degree of solution, has remained perfectly clean; a circumstance of great importance, as it points out the *limits of protection* and makes the application of a very *small quantity* of the oxidable metal more advantageous in fact than that of a larger one.

The wear of cast iron is not so rapid but that a mass of two or three inches in thickness will last for some years; at least the consumption in experiments which have been going on for nearly four months does not indicate a higher ratio. This must, however, depend on the relation of its mass to that of the copper, and upon other circumstances not yet ascertained (such as temperature, the relative saltness of the sea, and perhaps the rapidity of the motion of the ship); circumstances in relation to which I am about to make decisive experiments.

Many singular facts have occurred in the course of these researches. I shall mention some of them that I have confirmed by repeated experiments, and which have connexions with general science. Weak solutions of salt act strongly upon copper; strong ones, as brine, do not affect it; and the reason seems to be that they contain little or no atmospheric air, the oxygen of which seems necessary to give the electro-positive principle of change to menstrua of this class.

I had anticipated the result of this experiment, and upon the same principle of some others.

Alkaline solutions, for instance, impede or prevent the action of sea-water on copper, having in themselves the positive electrical energy which renders the copper negative. Limewater even, in this way renders null the power of action of copper on sea-water*.

The tendency of electrical and chemical action being always to produce an equilibrium in the electrical powers, the agency of all combinations formed of metals and fluids is to occasion decomposition, in such an order that alkaline, metallic, and inflammable matters are determined to the negative part of the combination; and chlorine, iodine oxygen, and acid matters to the positive part. I have shown in the Bakerian lecture for 1806, that this law holds good in the Voltaic battery. The same law applies to these feebler combinations. If copper in contact with cast iron be placed in a vessel half full of sea-water, and having its surface partially above that of the water, it will become coated with carbonate of lime, carbonate of magnesia, and carbonate of soda; and the carbonate of soda will gradually accumulate till the whole surface in the air is covered with its crystals:—and if the iron is in one vessel, and the copper forming an arc with it in another, and a third vessel of sea-water in electrical connexion by asbestos or cotton is intermediate, the water in this intermediate vessel continually becomes less saline: and undoubtedly, by a continuance of the process might be rendered fresh.

I shall not take up the time of the society, by referring to some obvious practical applications of these researches to the preservation of finely divided astronomical instruments of brass by iron, of instruments of steel by iron or zinc: my friend Mr. Pepys has already ingeniously taken advantage of this last circumstance, in inclosing finely cutting instruments in handles or cases lined with zinc, and many other such applications will occur. I cannot conclude without mentioning particularly my obligations to Sir Byam Martin, the Comptroller, and Sir Robert Seppings, the Surveyor of the Navy, for the interest they have taken and the zeal they have shown in promoting these researches; and without stating how much I owe to the care, attention, and accuracy of Mr. Nolloth, master shipwright, and Mr. Goodrich mechanist in the Dockyard at Portsmouth, in superintending the execution of many of the experiments.

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* From the Phil Trans. for 1824, Part II. Read June 17, 1824.

† Phil. Trans. 1824 I. or Phil. Mag. vol. lxiv. p. 30.

* I am at present engaged in applying this principle to experiments on the preservation of animal and vegetable substances.

Grimm's Ghost.

Letter XXIII.

My Wife's Relations.

From the New Monthly Mag. No. LII.

I was mainly induced to merry by reading in Cowper's Poems something similar to the following:

Domestic happiness, thou only bliss
That has survived the fall!

Cowper, to be sure, was never married *in propria persona*: but he wrote so movingly about sofas and hissing tea-urns, and evening walks, not to mention fireplaces and shining stores of needles, that there is no doubt he would have made a jewel of a husband, if Lady Austen, Lady Throck-morton, and Mrs. Unwin

had not been otherwise engaged. My aunt Edwards has him bound in two volumes, in red morocco, and always takes him in her carriage into the Regent's Park. She has two propositions, which she is ready to back for *self-evidentism* against any two in Euclid; the one is, that Cowper is the greatest poet in the English language, and the other, that when Fitzroy-square is finished (it has been half-finished nearly half a century), it will be the handsomest square in all London. Be that as it may, I took Cowper's hint abou domestic bliss: married Jemima Bradshaw, and took a house in Coram-street, Russell-square. We passed the honeymoon at Cheltenham; and my aunt Edwards lent us her Cowper in two volumes to take with us, that we might not be dull. We had a pretty considerable quantity of each other's society at starting, which I humbly opine to be not a good plan. I am told that pastry-cooks give their new apprentices a *carte blanche* among the tarts and jellies, to save those articles from their subsequent satiated stomachs. Young couples should begin with a little aversion, according to Mrs. Malaprop; old ones sometimes end with not a little: but it is not for me to be diving into causes and consequences—Benedicts have nothing to do with the laws of Hymen, but to obey them.

At Cheltenham my wife and I kept separate volumes. She studied "The Task" on a bench in the High-street, and I read Alexander Selkirk on the Well Walk. Long before the expiration of the period of our allotted banishment from town, I could repeat the whole poem by heart, uttering

O Solitude, where are the charms
That Sages have seen in thy face?

with an emphasis which shewed that I felt what I read.—On our arrival in Coram-street, I found such a quantity of cards, containing the names of relations on the both sides, all solicitous about our health, that I proposed to my wife an instant lithographic circular, assuring them severally that we were well, and hoped they were the same. This, however, would not do. In fact the bride-cake had done the business at starting. "Well, my dear Jemima," said I, "our confectioner did the civil thing at the outset, but your relations have been rather niggardly in returning the compliment. I think a few pounds of lump sugar would have been a more acceptable boon in exchange. They have filled our card-rack, and sent our japan canister empty away." My wife smiled at my simplicity, and ordered a glass-coach, to return their calls. The poor horses had a weary day's work of it: Mr. George Bradshaw lived in Finsbury-square, Mr. William Bradshaw in the Paragon, Kent-road, Mr. Æneas Bradshaw in Green-street, Grosvenor-square, Mr. and Mrs. Andrews (her maiden name was Jane Bradshaw) in Morning-lane, Hackney, and Mrs. Agatha Bradshaw, my wife's maiden aunt, in Elysium Row, Fulham. All these good people had a natural wish to gape and stare at the bridegroom: dinner-cards were the consequence, and the glass-coach was again in requisition. Mr. George Bradshaw, of Finsbury Square, was the first personage on the visiting list. From him I learned that the street called Old Bethlem, was newly christened Liverpool-street, and that the street adjoining took the name of Bloomfield-street, (I suppose upon the principle of *lucus a non lucendo*, because the prime minister and the farmer's boy were never seen in either); that Bethlem Hospital was removed to St. George's Fields; and that there was not a brick of London-wall now left standing. His wife was civil and obliging; but the next time I dine there, I will trouble Mrs. George Bradshaw not to pour my shrimp sauce over my salmon, but to deposit it on a detached portion of my plate. I sat at table next to a bill-broker in boots, who remembered John Palmer at the Royalty Theatre.—The Paragon in the Kent road next opened its semi circular bosom to deposit my spouse and me at the dinner table of Mr. William Bradshaw. Here a crowd of company was invited to meet us, consisting of my wife's first cousins from Canonbury, and several cousins from the Mile-end-road: worthy people, no doubt, but of no more moment to me than the body-guard of the Emperor of China. Matters were thus far rather at a discount; but the next party on the dinner-list raised them considerably above par. Mr. Æneas Bradshaw, of Green-street, Grosvenor-square, was a clerk in the Audit office, and shaved the crown of his head to look like Mr. Canning. Whether, in the event of trepanning, the resemblance would have gone deeper down, I will not attempt to decide. Certain however it is, that he talked and walked with an air of considerable sagacity: his politeness too was exemplary: he ventured to hope that I was in good health: he had been given to understand that I had taken a house in Coram-street: he could not bring himself for a moment to entertain a doubt that it was a very comfortable house; but he must take leave to be permitted to hint, that of all the houses he ever entered, that of Mr. Canning on Richmond Terrace, in Spring Gardens, was the most complete: Lord Liverpool's house, to be sure, was a very agreeable mansion, and of Mr. Secretary Peel was a capital affair: but still, with great deference, he must submit to my enlightened penetration that Richmond Terrace outstripped them all. It was meant to be implied by this harangue, that he, Mr. Æneas Bradshaw, was in the habit of dining at each of the above enumerated residences; and the bend of my head was meant to imply that I believed it:—two specimens of lying which I recommend to my friend Mrs. Opie for her next edition.

I now began to count the number of miles that the sending forth of our bride-cake would cause us to trot over: not to mention eighteen shillings per diem for the glass-coach, and three and sixpence to the coachman. My wife and I had now travelled from Coram-street to Finsbury-square, to the Paragon in Kent-road, and to Green street, Grosvenor square; and I did not find my "domestic happiness" at all increased by the peregrinations. As I re-entered my house from the last-mentioned visit, the housemaid put into my hands a parcel. It was a present from my aunt Edwards of the two volumes which had been lent to us during the honeymoon, with my aunt's manuscript observations in the margin. Well, thought I, at all events I have gained something by my marriage: here are two volumes of Cowper bound in red morocco: I will keep them by me, "a gross of green spectacles is better than nothing:" so saying, I opened one of the volumes at a venture, and read as follows:

"The sound of the church-going bell
These valleys and rocks never heard."

Happy valleys, thought I, and primitive rocks.

The entrance of my wife with another dinner card in her hand, marred my further meditations. Mr. and Mrs. Andrews now took their turn to request the honour of our company to dinner in Morning-lane, Hackney. There was something in the sound of Morning-lane that I did not dislike. I thought of Guido's Aurora; of "Life's Morning March," in the Soldier's Dream; of "Oh, how sweet is the Morning," in Lionel and Clarissa; and of "Across the Downs this morning," as sung by Storace in my own morning of life. What an erroneous anticipation! Morning-lane must be a corruption of Mourning-lane. Indeed the conversation at table strengthened the imputed etymology, for nothing was talked but the shameful height to which the dead had been carried in Hackney church-yard. And yet we are watched, said one. Ay, and gas lighted, said another. It is a shame, cried a third, that honest people cannot rest quiet in their graves. It will never be discontinued, cried a fourth, till a few of those felonious fellows are hanged at the Old Bailey with their shovels about their necks:—and so on to the end of the first course. As every body looked at the bridegroom in seeming expectation of a seconder of their multifarious motions, I ventured to set forth the grounds of my dissent. I observed, that, as the days of Amina in the Arabian Nights had passed away, I took it for granted that these highly-rebuked exhumators did not raise the bodies to eat them: that their object, in all probability, was to sell them to the anatomists for dissection: that the skill of the latter must be held to be greatly improved by the practice; and, therefore, that I saw no great objection to taking up a dead body, if the effect produced was that of prolonging the continuance upon earth of a living one. My line of argument was not at all relished by the natives of a parish who all feared a similar disturbance; and Mrs. Oldham, whose house looks into the church-yard, on the Homerton side, whispered to a man in powder with a pigtail, her astonishment that Jemima Bradshaw should have thrown herself away upon a man of such libertine principles.

One more glass-coach yet remained to be ascended. I felt not a little wearied; but the sight of land encouraged me. So, like a young stock broker enrolled a member of the Whitehall Club, I pulled for dear life, and entered the haven of Mrs. Agatha Bradshaw, my wife's maiden aunt, in Elysium-row, Fulham. The poodle-dog bit the calf of my leg; the servant maid crammed my best beaver hat into that of a chuckle-headed Blackwell-hall factor, who wore powder and pomatum; and—there was boiled mutton for dinner! All this, however, time and an excellent constitution might have enobled me to master. But when Agatha Bradshaw, spinster, began to open the thousand and one sluices of self-love, by occupying our ears with her "Memoirs, Anecdotes, Facts and Opinions," shewing that her butcher was the best of all possible butchers, and her baker the best of all possible bakers: reminding us that her father, the late Sir Barnaby Bradshaw, knight and leather-seller, was hand and glove with the butler of the late Lord Ranelagh,—the trees of whose mansions waved sullenly in our view: that Mat. the Fulham coach-driver, grew his jokes, and Delve, the market-gardener, his cucumbers, upon hints given by the said late Sir B. B. and that she,

the said Agatha, in answer to a question as to the second series of Sayings and Doings, "read very little English," I could not but mutter to myself, "Will nobody move for an injunction to stay this [redacted] of words? Here is a palpable leaf stolen from the family-tree of another spinster higher up the stream of the same river.!"

So much for my wife's relations; and, for aught I know, the mischief may not end here. There may be uncles and aunts in the background. It is all very well for my wife: she is made much of: dressed in white satin and flowers, and placed at the right-hand of the lady of the mansion at dinner as a bride; whilst I, as a bridegroom, am thought nothing of at all, but placed, *sans ceremonie*, at the bottom of the table during this perilous month of March, when the wind cuts my legs in two every time the door opens. I must confess I am not so pleased with Cowper's Works as I used to be. "Domestic Happiness" (if every married body's is like mine,) may have "*survived* the Fall," but it has received a compound fracture in the process. These repeated glass-coaches, not to mention dinners in return, will make a terrible hole in our eight hundred and fifty pounds a-year (my wife will keep calling it a thousand): and all this to entertain or be entertaind by people who would not care three straws if I dropped into a soapboiler's vat. It is possible that felicity may reach me at last: perhaps when my aunt Edwards' Fitzroy-square gets its two deficient sides and becomes the handsomest square in all London. In the mean time "the grass grows." I say nothing: but this I will say, should any thing happen to the present soother of my sorrows, and should I be tempted once more to enter the Temple of Hymen, my advertisement for a new help-mate shall run in the following form: "Wanted a wife whose relations lie in a ring-fence."

On the Nature and Properties of Indigo; with Directions for the Valuation of different samples. By John Dalton, *Esq. F. R. S. &c.**

From the Philosophical Mag. No. CCCXXII.

We owe the first good approximation to the chemical analysis of the indigo of commerce to Bergman. According to his experiments, the best samples of indigo yielded, by analysis, the following principles:

47	pure indigo
12	gum
6	resin
22	earth
13	oxide of Iron
100	

A subsequent analysis of indigo made by Chevreul *Annal. de Chimie*, t. 68), gives 45 per cent of pure indigo in the best Guatimala indigo, and the foreign matters much the same as by Bergman, but differing considerably in the proportions. Indeed it is most probable that the foreign matters will be found to differ materially, both in quantity and kind, from the various modes and circumstances of the manufacture as practised in different places, and perhaps from the various species of plants from which the indigo is extracted in different parts of the world.

It is to be understood that the part called pure indigo is the sole colouring matter, and that which gives value to the article. The rest may be considered as dross, doing no good, and being probably harmless to the use of the drug as a dye, but scarcely so to the printer, who meets with obstructions enough in the exercise of his art, without introducing such as may easily be avoided.

When we consider, however, that indigo is produced by a species of fermentation from vegetable matter, analogous to the vinous and acetous fermentation of saccharine matter, it is not improbable that the fermentation in many cases may be incomplete. And as the foreign matter found in the indigo of commerce is chiefly vegetable, and composed of the same elements as pure indigo, it may by a fresh fermentation develop more of the pure indigo than is found in it originally. This conjecture is countenanced by the practice of dyers, who, when the indigo is nearly spent, as the phrase is, put in other vegetable matter to the residue, and by certain processes obtain an addition to the quantity of colouring, which otherwise would not be acquired. In a similar way I conceive it is that vinegar made from sugar often contains a considerable portion of the latter, which has escaped the fermenting process.

There are two ways of obtaining pure indigo. The one is that commonly practised by dyers in their use of the article. On a small scale it may be effected as follows: into a twoquart bottle put 50 grains of finely pounded indigo, three or four times as much sulphate of iron, and hydrate of lime same weight as the salt of iron. Then fill the bottle with water, leaving little more room than what the cork or stopper will occupy. Mix up the contents by repeated agitation, and then let the insoluble matters subside. A fine transparent greenish-yellow liquid will appear in a day or two, which must be drawn off carefully by a syphon. As soon as this liquid is agitated in the air it becomes opaque, and a precipitate is formed, which is pure indigo; but it cannot be collected without some carbonate of lime in the first instance; it must therefore be submitted to water acidulated with muriatic acid, which dissolves the lime, and leaves the pure indigo to subside. Afterwards it may be collected on a filtre and dried. The theory of this process is now well understood. Pure indigo, deprived of certain portion of oxygen, is known to be soluble, in lime-water; the protoxide of iron, precipitated by the lime, deprives it of this oxygen, and hence the solution of the de-oxidized indigo. Such, however, is the affinity of indigo in this state for oxygen, that it resumes it from atmospheric air the moment they are brought into contact.

Pure indigo thus obtained is called *precipitated* indigo: the solution may also be had from a blue-dyer's vat by plunging an empty phial into the liquid a few inches below the surface.

The other way of obtaining pure indigo is by sublimation. Take 20 or 30 grains of pulverized common indigo and place it in an iron spoon, which must be gradually heated to 500° or 600° Fahrenheit. A purple smoke will then exhale copiously, and at the same time a fine tissue of small, shining, silky needles will start up on the surface of the indigo. These may be withdrawn by the point of a knife; they are crystals of sublimed indigo.

Precipitated and *sublimed* indigo appear by the chemical tests to be constituted of the same elements; and no doubt is entertained that they present the pure colouring matter of indigo in its most concentrated form.

Three chemists have published analyses of pure indigo within the last three years; namely, Drs. Thomson and Ure, and Mr. W. Crum, all of Clasgow. The same plan was adopted by all three; namely, burning a small given portion of indigo in contact with the black oxide of copper in green glass tubes. The indigo being finely divided and intimately diffused through a comparatively large portion of the oxide, heat is applied sufficient to burn the carbon and hydrogen of the indigo, and to liberate the azote: hence from the quantities of carbonic acid and azote produced and the loss of weight which the oxide sustains, the constituents of indigo are inferred. The results are below:

	Dr. Thomson.	Dr. Ure.	Mr. Crum.
Carbon	40.39	71.37	73.22
Azote	13.46	10	11.26
Oxygen	46.15	14.25	12.60
Hydrogen	0	4.38	2.92
	100	100	100

It is observable that the results of Dr. Ure and Mr. Crum present no remarkable differences, except in regard to hydrogen; whilst Dr. Thomson finds no hydrogen; and remarkable differences between his results and those of the other two are found in the articles carbon and oxygen.

The atomic constitution of indigo by the above authors is as follows:

	Dr. Thomson.	Dr. Ure.	Mr. Crum.
Carbon	7 atoms	16 atoms	16 atoms
Oxygen	6 do.	2 do.	2 do.
Azote	1 do.	1 do.	1 do.
Hydrogen	0 do.	6 do.	4 do.
	14	25	23

I am inclined to think the analysis of Mr. Crum as likely to be an approximation to the constitution of pure indigo as either of the other two; and I should adopt his atomic constitution, if he would modify it so as to adopt my weight of the atom of azote instead of its double, which has somehow got into common reception as a substitute without any sufficient reason that I can find. If we adopt my weight for azote, Mr. Crum's atoms will become 16, 2, 2. and 4; which being all divisible by 2, become

8	atoms carbon
1	atom oxygen
1	atom azote
2	atoms hydrogen
12	

This simplification of the atone of indigo I suggested to Mr. Crum in a conversation we had together, and he seemed inclined to adopt it. Referring therefore to my scale of

* From the Memoirs of the Literary and Philosophical Society of Manchester.

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atomic numbers, we shall have the atom of pure indigo to consist of

8 atoms carbon	54	43.2	75.5
1 atom oxygen	7	7	12.3
1 atom azote	5	5	8.7
2 atmos hydrogen	1	2	3.5
		57.2	100

Mr. Crum, in his very ingenious essay above referred to, finds that a compound o one atom of indigo and one of water may be formed by means of sulphuric acid; he denominates it *phenicin*; it may perhaps be better designated by the name of proto-hydrate of indigo. The common product of sulphuric acid and indigo, or *sulphate of indigo* of Dr. Bancroft, he calls *eerulin*, and finds it to be a compound of one indigo and two of water, or the deuto-hydrate of indigo.

I have made no attempts myself to analyse pure indigo into its constituent elements, but have often tried, both recently and some years go, to find the quantity of oxygen required to convert the green indigo solutions in lime-water in o blue indigo. The results have been pretty uniformly the same—namely, that the oxygen which combined with the green indigo, to convert it to blue, was about one-seventh or one-eighth of the whole weight of the resulting indigo, and hence I concluded, on the supposition that one atom of oxygen was added to one of indigo, that the atom of indigo must weigh about 55, or 56; and this conclusion I pointed out to Mr. Crum, as corrobcrating his analysis. The quantity of oxygen required was much less, and of course the weight of the atom of indigo was much greater than I had anticipated.

We now proceed to the consideration of the best means of fixing a comparative value upon the different samples of the indigo of commerce. After numerous trials I find the method first suggested by Descoroisill to judge of the strength of oxy muriatic acid to be preferred. The objects indeed are different, but the operations are analogous: he made use of a given solution of indigo to ascertain the comparative strengths of various solutions containing oxymuriatic acid; on the other hand, I propose to use a solution of oxymuriatic acid of known strength, to compare the relative quantities of pure indigo in different samples.

In the first volume of the Annals of Philosophy (1813) I pointed out a safe and easy method of estimating the quantity of oxymuriatic acid, in solutions of oxymuriate of lime, not by solutions of indigo, which must be variable from the quality of the indigo, but by solutions of protosulphate of iron, which can always be obtained of the same strength. I say *safe* and *easy* method, notwithstanding we are gravely told by one professor of chemistry that he had tried the method and was nearly killed by it; and nother states that he had attempted to follow my method, but did not succeed. Any person who is tolerably skilled in chemical manipulations, and has the two liquids, sulphate of iron of a known strength, and oxymuriate of lime of a known specific gravity, before him, may determine the strength of the oxymuriate in the space of five minuties. In this time I found the strength of the oxymuriate of lime used on the present occasion. Having by me a solution of proto-sulphate of iron containing eight per cent oxide, I took 50 grain measures of it and poured them into a wine glass, then 100 of the oxymuriate, stirring the mixture, after which no smell was perceived: 100 more were poured in, still no smell; then dropped in ten grains at a time by a dropping tube, stirring the mixture each time; the fifth 10 grains produced a slight but transient smell; the sixth a strong and permanent smell. Hence 250 were required to saturate 50 of the sulphate. The oxide (four grains) being divided by nine, gives ·444 for the weight of oxygen in 250 oxymuriate, or ·17 parts of a grain of oxygen are imparted by each hundred of the liquid.

In the essay above referred to I mentioned another method of investigating the value of oxymuriate of lime solution; but, owing to the then prevailing erroneous notion on the proportion of the elements of nitric acid, no satisfactory application could be made of it. I now find that oxymuriate of lime converts nitrous gas into nitric acid immediately; and hence this operation may be used with great elegance and precision to show the real quantity of oxymuriatic acid in solutions.

For example; I took a graduated tube of capacity equal to 300 grains of water; I filled it with pure nitrous gas, and then transferred it to a cup of the liquid oxym riate, valued above by the sulphate of iron. After repeated agitation, covering the end of the tube carefully with my finger, I soon had 100 measures of liquid in the tube: then withdrawing it to a cup of water I agitated repeadly, letting in water each time, instead of oxymuriate of lime, because I was aware that the 100 measures already in the tube were not saturated. Soon after, the process was at an end, no more nitrous gas being absorbed. The 100 measures of the oxymuriate took 168 measures of nitrous gas to saturate them. Now deducting one sixteenth of this for the nitrous gas impregnating the liquid, and for loss occasioned by the free oxygen gas in the water which the nitrous gas had to combine with, there will remain 157 nitrous gas=.2 grain weight, which was converted into nitric acid; but if we deduct one-eighth part from the weight of nitrous gas, we shall have the weight of oxygen requisite to convert it into nitric acid=175 parts of a grain; only differing $\frac{2}{1000}$ from the other valuation by sulphate of iron.

To find the value of any sample of indigo, I take one grain carefully weighed from a mass finely pulverized. I put this into a small glass, a wine-glass for example; then by a dropping tube I put two or three grains of concentrated sulphuric acid upon it. The two principles are next well mixed together by trituration with the end of a small glass rod. Water is then poured in, and the colouring matter fully diffused through it. The liquid is now transferred into a tall cylindrical jar, of about one inch internal diameter; more water is poured in till the mixture becomes sufficiently dilute to show the figure of the flame of a candle through it. Then the liquid oxymuriate is mixed with the liquid gradually and by measure, agitating duly each time, and never putting any more in till the smell of the preceding has vanished. The liquid soon becomes transparent and of a beautiful greenish-yellow appearance; after the dross has subsided, the clear liquid, may be poured off, and a little more water put to the sediment, with a few drops of oxymuriate lime, and a drop of dilute sulphuric acid; if more yellow liq id is produced, it arises from par icles of indigo which have escaped the action of the oxymuriate before, and must be added to the rest.

The value of the indigo I consider in proportion to the quantity of real oxymuriate of lime necessary to destroy its colour. The value also may be well estimated by the quantity and intensity of the amber-coloured liquid which the indigo produces, and this is found independently of any valuation of the oxymuriate of lime.

Some of the samples I have tried, and the results are as under:

1.—*Precipitated* and *sublimed* indigo, each one grain, gave nearly the same results. Each of these required 140 grains of the oxymuriate of lime solution, corresponding to 25 parts o a grain of oxygen. The yellow liquid obtained was 3600 grains.

2.—Flore indigo, one grain, required 70 of the oxymuriate =. 125 parts of grain of oxygen, or one half of the other.

The same result from a sample marked J. R. *best.*

3.—Indigoes marked I P and 3 P required about 60 of the oxymuriate.

4.—Those marked J. R. *middle*, J. R. *worst*, and 4 P, required about 50 oxymuriate.

5.—That marked *Wood* was rather inferior to the above, but required above 40 oxymuriate.

6.—Those marked 2 P and 1194 were the lowest I have examined; one grain of each did not require more than 30 oxymuriate, or 35 at the most. A poor turbid yellow liquor was produced. The sample 2 P, when burned, yielded about 30 per cent of fine sand.

Upon a review of these experiments, I am pe suaded that to destroy indigo by oxymuriatic acid, *twice* the quantity of oxygen is necessary that is required to revive it from the lime solution.

I hope the subject here taken up will not be considered as unimportant, when we are informed that the article *indigo* imported into this country annually, about fifteen years ago, amounted in value to upwards of two millions of pounds sterling; and it much exceeds that sum in all probability at the present time.

CHEMISTRY.

Cold produced by the Combination of Metals.—According to M. Dobereiner, the fusible metal consists of one atom of lead, one of tin, and two of bismuth; and it becomes fluid when exposed to a heat of 210.° If the fusible metal, formed of 118 grains of filings of tin, 207 grains of filings of lead, and 286 grains of pulverised bismuth, be incorporated in a dish of calendered paper, with 1616 grains of mercury, the *temperature will instantly sink* from 65° to 14° M. Dobereiner thinks, that it might fall so low as the freezing point of mercury, if the experiments were made at a temperature a little under 32°.—See Schweigger's *Neue Journal*, xii. p 182.

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